



**basic education**

Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

# Grade 3 Mathematics

## Mental Starters Assessment Project (MSAP)

Mental Starters: Tasks and Assessments

TEACHER GUIDE: SETSWANA



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Acknowledgements:

Our thanks to the broader team who grappled with the author team to conceptualise these:

Lawan Abdulhamid, Noluntu Baart, Mark Chetty, Busi Goba, Corin Mathews, Zanele Mofu, Debbie Stott, Thulelah Takane, Herman Tshesane, Lyn Webb, Marie Weitz, Lise Westaway, Bob Wright.

Our thanks to the DBE and FRF for their support of this work.

This project was initiated and led by the two South African Numeracy Chairs, Professors Hamsa Venkat and Mellony Graven, at the University of the Witwatersrand and Rhodes University. It is based on research supported by the South African Research Chairs Initiative of the Department of Science and Technology and National Research Foundation (Grant Nos. 74658 and 74703). Any opinion, finding and conclusion or recommendation expressed in this material is that of the author(s) and the NRF does not accept any liability in this regard.



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## MATSENO

Kaedi e ya morutabana e na le **diyuniti** di le **6** tsa **tshimologo thuto** ya **dipalo tsa tlhaloganyo** tsa barutwana ba kereite 3. Togamaano ya palelo e e farologaneng e tsepame go yuniti nngwe le nngwe. Ditogamaano tsa palelo di tseilwe go tswa mo kharikhulamong. Yuniti nngwe le nngwe e akaretsa setlhopa sa bokgoni jwa kgolagano e e rileng.

**Maikaelelo** ke go tlosa barutwana go bala ka bonngwe ba dirisa menwana ya bone kgotsa go thala matshwao a thali mo pampiring. Go bala ka bonngwe go tsaya nako le go dira gore re dire diphoso. Go feleletsa go sa re tswele mosola fa dipalo di ntse di oketsega. Ditogamaano le bokgoni di thusa ka kgopololo e e maatla ya dipalo.

### Ditogamaano di le thataro tsa go balela le mola-nako

Diyuniti di akaretsa go kgabaganya dikgweditharo di le tharo tsa ntlha jaaka di latelana:

Term 1	Go kgabaganyetša go lesome	$36 + 7 =$	
--------	----------------------------	------------	--

Term 1	Ditogamaano tsa go ntsha	$43 - 12 =$	
--------	--------------------------	-------------	--

Term 2	Koketsopedi le go kgaoganya magareng	29 gabedi =	
--------	--------------------------------------	-------------	--

Term 2	Go atametsa le go baakanya	$47 + 29 =$	
--------	----------------------------	-------------	--

Term 3	Go rulaganya-sešwa	$26 + 17 + 4 =$	
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Term 3	Go golaganya go tlhakanya le go ntsha	$\square - 30 = 9$	<table border="1" style="margin: 0 auto;"> <tr> <td style="width: 50px; text-align: center;">30</td> <td style="width: 50px; text-align: center;">9</td> </tr> <tr> <td colspan="2" style="text-align: center;">□</td> </tr> </table> $30 + 9 = \square$	30	9	□		= 39
30	9							
□								

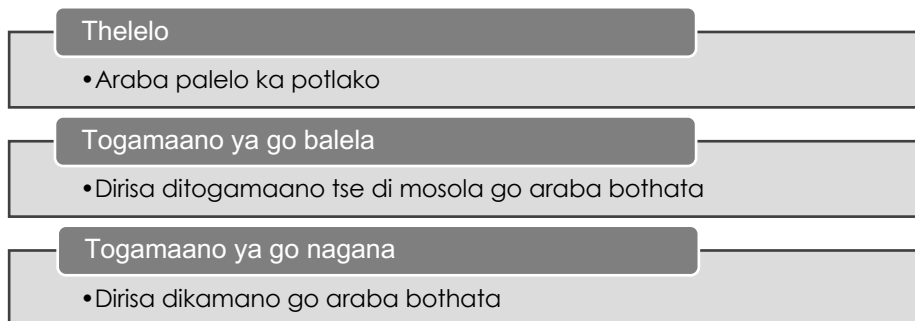
## Sekao

Yuniti nngwe le nngwe e tsaya boleele jwa dibeke di le tharo le go latela sekao se:



Yuniti nngwe le nngwe e simolola le go feleletsa ka tlhatlhobo e khutshwane ya barutwana. Go tshwaya ditlhatlhobo tse go neelana ka tshedimosetso go morutabana le gore barutwana ba tswelletse jang morago ga go dirisa sete ya bokgoni jo bo rileng ka nako ya beke di le tharo.

Mo teng ga yuniti nngwe le nngwe, re tsepamisa mo mefuteng e le meraro ya go balela:



Go dira ka tshimologo ya dithuto mo yuniting nngwe le nngwe le barutwana ba gago, go ka dira gore barutwana ba tokafale mo tiragatsong ya tlhatlhobo ya pele go ya go ya bofelo. Go tokafala go, go bontsha tswelelopele mo bokgoning jwa dipalo tlhatlhobo le kgopololo ya dipalo.

### Re dirisa kaedi e jang

Bukana e, e neelana ka tshedimosetso ya ditlhatlhobo le tshimologo thuto ya yuniti nngwe le nngwe. Tshimologo ya thuto e diretswe go lekana **metso e le 10** ya tsa molomo le dipalo tlhaloganyo mo tshimologong ya thuto ya dipalo.

Tshimologo thuto nngwe le nngwe e simolola ka **go ithutafatsa ga tlhaloganyo motsotso o le mongwe**, go tsepamisitswe botlhokwa jwa bokgoni jwa go nagana ka bonako go yuniti eo. Morutwana mongwe le mongwe o tshwanetse go araba dipotso ka bonako le ka botshepegi.

**Tshimologo thuto ya tirwana tatelano** e latela ya go ithutafatsa. Tirwana tatelano mo tshimologo thuto nngwe le nngwe e tlhalosa:

- **Go ruta jang** togamaano (e e bontshitsweng mo molemeng) le
- **Go kwala eng** mo patikwalelo (e e bontshitsweng mo mojang)

Morago ga tshimologo thuto go na le **ditiro ka nosi** tsa barutwana go feleletsa. Barutwana ba tshwanetse go leka ditirwana tse ka tlhaloganyo ba dirisa togamaano tse ba fetsang go ithuta. Bolelela barutwana **ba seka ba bala ka bo-1**. Letla barutwana ba itemogela mathata, ba kope go go bontsha tiro ya bone, sk. Go molapalo o o se nang sepe, kgotsa go taekerama ya bara. Molapalo le taekeramo ya bara di tshwanetse go nna makgwarakgwara jaaka maikaelelo e le go thusa go dira ka tlhaloganyo.

Kopa barutwana go **tlhalosa go nagana ga bona** go wena le ba bangwe. Se se tla go letlelela go tlhatlhoba gore a ba dirisa togamano e ba ithutileng yona.

**Tshegetso ya dividio:** Go lebagana le ya tshimologo thuto nngwe le nngwe go na lekgokaganyo ya vidio e khutshwane go bontsha gore togamaano e dira jang. O ka bula kgokaganyo ka go:

- Supa khamera ya mogala wa gago wa letheke go code QR mo sekwereng kgotsa
- Thaepa link ya [youtu.be](https://youtu.be) link go web browser

Morago ga Tshimologo Thuto 4 le Tshimologo Thuto 7, go na le **dipampiri-tiro tsa ikatiso ka nosi** tse barutwana ba ka di dirisang go ikatisa kwa gae.

**Memorantamo** go ditlhatlhobo pele le bofelo le dipampiri-tiro di neetswe kwa pheletsong ya kaedi e.

### **The Print Masters Book**

Go na le dibukana tse di farologaneng tsa **PRINT MASTERS** tse di nang le:

- Ditlhatlhobo tsotlhe tsa pele le ditlhatlhobo tsa bofelo
- Dipampiri-tiro tsotlhe tsa tiro ya go isa gae.
- Dithusa-thuto tsotlhe tse di porentiwang.



## GO KGABAGANYETSA GO LESOME

### Matseno

Maitlhommo a tshimologo thuto tsa ntlha tse nne ke go tlhakanya o kgabaganyetsa go lesome. Go tshimologo thuto tse nne tse di latelang, maitlhommo ke go ntsha o kgabaganyetsa go lesome. Dingwe tsa ditirwana di etelwa pele ke morutabana mo patikwalelo, tse dingwe ke tsa barutwana go dira k abo bona.

### Bokgoni ba go gopola ka bonako

Go na le mekgwa e le merataro ya bokgoni ba go gopola ka bonako e barutwana ba tshwanetseng go ithuta go kgabaganyetsa go lesome:

- kgolagano ya 10 le katiso ya 10 (sk.  $7 + \square = 10$ ;  $12 + \square = 20$ )
- tlhakanya katiso ya lesome (sk.  $60 + 3 = 63$ )
- tlosa katiso ya lesome (sk.  $60 - 2 = 58$ )
- kgabaganyetsa go katiso ya lesome e e latelang morago ga palo (sk.  $32 \rightarrow 40$ )
- kgabaganyetsa go katiso ya lesome pele ga palo (e.g.  $56 \rightarrow 50$ )
- go fetola thulaganyo ya palelo (sk.  $7 +$  le eng ke lesome? tlhakanya 7 ka eng ke lesome?)

Leina:

## Go kgabaganyetsa go lesome: Tlhatlhobo-pele

Karolo I

Metsotso e le 2

1.  $7 + 3 = \square$

11.  $50 + 6 = \square$

2.  $2 + 8 = \square$

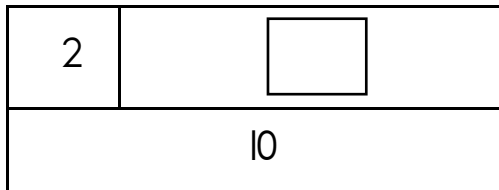
12.  $3 + 60 = \square$

3.  $10 = 7 + \square$

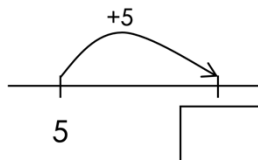
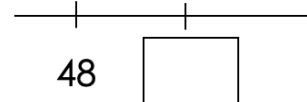
13.  $40 - 7 = \square$

4. 8 e nnye go 10 ka  $\square$

14.  $40 + 8 = \square$



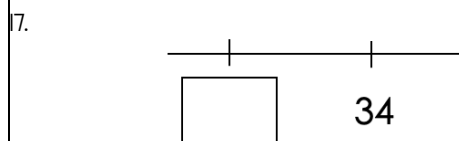
15. Go latela katiso ya 10 efe?



16.  $100 + 27 = \square$

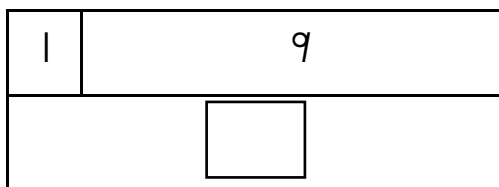
7.  $10 - 5 = \square$

Ke katiso ya 10 efe e e tlang pele ga 34?



8.  $10 - 4 = \square$

18.  $\square + 7 = 50$



19.  $30 - \square = 27$

20.  $\square + 10 = 10$

20.  $87 = 80 + \square$

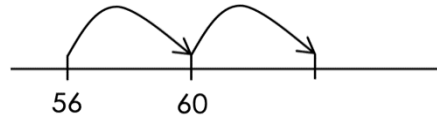
Maduo otlhe go tswa go 20

## Go kgabaganyetsa go lesome: Tlhatlhobo-pele

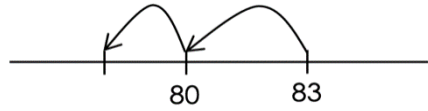
Karolo 2

Metsotso e le 3

1.  $56 + 8 = \square$



2.  $83 - 4 = \square$



3.  $93 - 7 = \square$

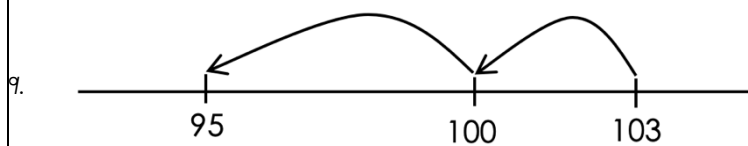
4.  $67 + \square = 73$

5.  $\square + 7 = 82$

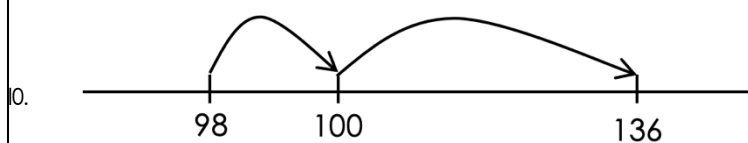
6.  $67 + 5 = 67 + 3 + \square$

7.  $94 - \square = 94 - 4 - 2$

8.  $98 + 56 = 98 + 2 + \square$



$103 - \square = 95$



$98 + \square = 136$

Maduo otlhe go tswa go 10

**GO KGABAGANYETSA GO LESOME: TSHIMOLOGO THUTO 1****Pop-Fizz**

Morutabana a re “pop”, barutwana ba re “fizz”, morutabana a ba bua nomoro, barutwana ba araba ka nomoro e e tshwanang le bokgoni ba go gopola ka bonako.

**a. Pop-Fizz e dira 10**

Mo go e e latelang, barutwana ba araba ka dipalo tse di tla dirang palo ya 10

Morutabana: pop	→	Barutwana: fizz	
Morutabana: 3	→	Barutwana: 7	
Morutabana: pop	→	Barutwana: fizz	
Morutabana: 6	→	Barutwana: 4	jalojalo...

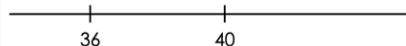
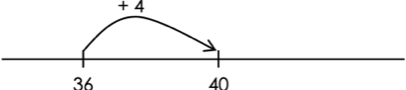
**b. Pop-Fizz Dira 20 (kgotsa katiso nngwe ya 10)**

Mo go e e latelang, barutwana ba araba ka dipalo tse di tla dirang palogotlhe ya 20 (kgotsa katiso nngwe le nngwe ya 10).

Morutabana: pop	→	Barutwana: fizz	
Morutabana: 16	→	Barutwana: 4	
Morutabana: pop	→	Barutwana: fizz	
Morutabana: 11	→	Barutwana: 9	jalojalo...

**Tatelano ya Tirwana**

Mo thutong e, re dirisa togamaano ya go kgabaganyetsa go lesome go balela ka go tlhakanya

<p>Tharabololo: <math>36 + 7</math></p> <p>Kwala ‘<math>36 + 7 =</math>’ mo patikwalelo.</p> <p>Thala mola mme o tshwaye ka ntlha e e kayang ‘36’.</p> <p>Morutabana: Re a tlhakanya, re tlhoka go tlolela kwa pele. Katiso ya 10 e e tlang morago ga 36 ke efe?</p> <p>Morutwana o tshwanetse go tla go tshwaya ‘40’ mo moleng.</p>	<p style="text-align: center;"><math>36 + 7 =</math></p> 
<p>Morutabana: Re tshwanetse go tlolela kwa pele ga 7 go tloga go 36. A re tlole ga nngwe go katiso e e latelang ya lesome go na le gore re tlole ka bo1. 36 tlhakanya le eng go go fa 40?</p> <p>Barutwana: 4</p>	<p style="text-align: center;"><math>36 + 7 =</math></p> 

<p>Morutabana: Re tlhakantse 4.                  Re tlhoka go tlhakanya 7                  7 e kgaogantswe ka 4 le eng?</p> <p>Barutwana: 3                  Kgaoganya 7 go <math>36 + 7</math> mo go 4 ka 3.</p> <p>Morutabana: Re tshwanetse go tlhakanya go feta ga kae?</p> <p>Barutwana: 3</p>	<p>The first diagram shows the equation <math>36 + 7 =</math> with 7 decomposed into 4 and 3. Below it, a number line starts at 36, has an arrow labeled '+4' pointing to 40, and then an arrow labeled '+3' pointing to 43.</p> <p>The second diagram shows the equation <math>36 + 7 =</math> with 7 decomposed into 4 and 3. Below it, a number line starts at 36, has an arrow labeled '+4' pointing to 40, and then an arrow labeled '+3' pointing to 43.</p>
<p>Morutabana: Go tlhakanya 40 le 3 ke bokae?</p> <p>Barutwana: 43</p> <p>Morutabana: Ka jalo, <math>36 + 7 = 36 + 4 + 3 = 43</math></p>	<p>The diagram shows the equation <math>36 + 7 = 43</math> with 7 decomposed into 4 and 3. Below it, a number line starts at 36, has an arrow labeled '+4' pointing to 40, and then an arrow labeled '+3' pointing to 43.</p>

**Tirwana ka nosi**

Barutwana ba tshwanetse go leka sekao se se latelang ka tlhaloganyo:

$48 + 6$        $63 + 8$

Barutwana ba tswanetse go tlhalosa go nagana ga bone sk. e.g. “ $48 + 6$ , ke tlhakanya 2 go 48 go bona 50, ke tlhakanye 4, ka jalo karabo ke 54.”

Bolelela barutwana ba SE bale ka bo1.

Bana ba ba itemogelang dikgoreletsi go dira se ka tlhaloganyo ba ka nna ba taka molapalo o o makgwarakgwara go ba thusa.

**Tshegetso ya Vedio**

Go kgabaganyetsa go lesome 1



[https://youtu.be/iJNrdV3P4\\_s](https://youtu.be/iJNrdV3P4_s)

**Tshegetso ya Vedio**

Go kgabaganyetsa go lesome 2



<https://youtu.be/upvlvkC3Yko>

## GO KGABAGANYETSA GO LESOME: TSHIMOLOGO THUTO 2

### Go ithutafatsa ga tlhaloganyo motsotso o le mo 1

- a. Pop-Fizz: Dira 10 le/kgotsa dira 20 (kgotsa katiso nngwe le nngwe ya lesome)  
 b. Go tlolela go katiso ya 10 e e latelang (sk.  $23 \rightarrow 30$ ;  $56 \rightarrow 60$ )

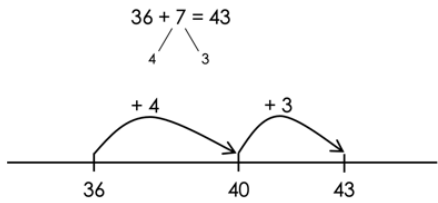
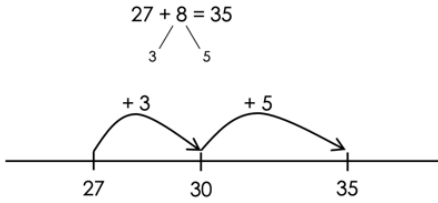
Se ga se go atametsa go lesome le le gaufi mme ke go tlolela go katiso ya 10 e e latelang mo molapalong.

“Ke katisanetswe efe e e **latelang** mo **morago** ga ...?”

Morutabana: 47                      →        Barutwana: 50  
 Morutabana: 32                      →        Barutwana: 40        jalojalo...

### Tatelano ya Tirwana

Mo thutong e, re dirisa togamaano ya go kgabaganyetsa go lesome go balela ka go tlhakanya

<p>Bolelela barutwana go gopola go tloga maabane: Re ranolotse jang <math>36 + 7</math>?</p> <p>Simolola ka go thala mola mme o tshwaye ntlha ka '36'.</p> <p>Morutabana: Re a tlhakanya ka jalo re tlhoka go tlolela kwa pele. Katiso ya lesome e e latelang morago ga 36 ke efe?</p> <p>Barutwana: 40</p> <p>Morutwana o tshwanetse go tla go tshwaya mola.</p> <p>Letlelela barutwana go tlhalosa mokgwa le gore o bereka jang le go o supa mo patikwalelo</p>	<p>Setshwantsho se se tletseng sa bofelo se ka fa tlase:</p> 
<p>Jaanong, supa mo patikwalelo gore o kgabaganyetsa go lesome jang go rarabolola: <math>27 + 8</math></p> <p>Simolola ka go thala mola mme o tshwaye ntlha ka '27' mme o rarabolole palo o dirisa togamaano ya go kgabaganyetsa go lesome.</p>	<p>Setshwantsho se se tletseng sa bofelo se ka fa tlase:</p> 

### Tirwana ka nosi

Barutwana ba tshwanetse go leka sekao se se latelang ka tlhaloganyo:  $42 + 9$

Barutwana ba tswanetse go tlhalosa go nagana ga bone sk. “ $42 + 9$ , ke tlhakanya 8 go 42 go bona 50, ke tlhakanye 1, ka jalo karabo ke 51.”

Bolelela barutwana ba SE bale ka bo1.

Bana ba ba itemogelang mathata go dira se ka tlhaloganyo ba ka nna ba taka molapalo o o makgwarakgware go ba thusa.

**Tshegetso ya Vidio**

Go kgabaganyetsa go lesome 3



[https://youtu.be/wDEEqU9B\\_5Q](https://youtu.be/wDEEqU9B_5Q)



**GO KGABAGANYETSA GO LESOME: TSHIMOLOGO THUTO 3****Go ithutafatsa ga tlhaloganyo motsotso o le 1**

a. Go tlolela go katiso ya 10 e e latelang (sk.  $23 \rightarrow 30$ ;  $56 \rightarrow 60$ )

b. Go tlhakanya ka katiso ya lesome

Ke eng ....?

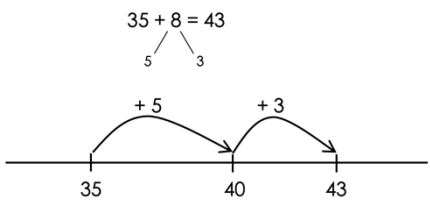
Morutabana:  $30 + 6 \rightarrow$  Barutwana: 36

Morutabana:  $50 + 2 \rightarrow$  Barutwana: 52

Morutabana:  $70 + 5 \rightarrow$  Barutwana: 75 jalojalo...

**Tatelano ya Tirwana**

Mo thutong e, re dirisa togamaano ya go kgabaganyetsa go lesome go balela ka tlhakanya

<p>Supa mo patikwalelo go kgabaganyetsa go lesome go rarabolola: <math>35 + 8</math></p> <p>Simolola ka go thala mola mme o tshwaye ntlha ka '35'</p> <p>Rarabolola palo o dirisa togamaano ya go kgabaganyetsa go lesome.</p>	<p>Setshwantsho se se tletseng sa bofelo se ka fa tlase:</p> 
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**Tirwana ka nosi**

Barutwana ba tshwanetse go leka sekao se se latelang ka tlhaloganyo:

$44 + 8$        $39 + 7$

Barutwana ba tswanetse go tlhalosa go nagana ga bone sk. " $44 + 8$ , ke tlhakanya 6 le 44 go bona 50, ke tlhakanye le 2 go fitlha go 52".

Bolelela barutwana ba SE bale ka bo1.

Neela ba ba fetsang ka bonako tiro e ntsi ya ikatiso:

$43 + 8$        $67 + 6$        $84 + 7$

**GO KGABAGANYETSA GO LESOME: TSHIMOLOGO THUTO 4**

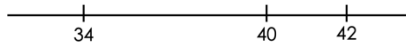
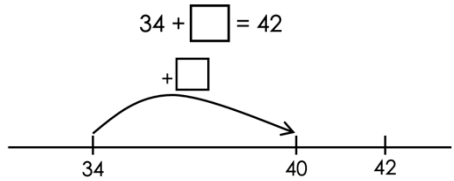
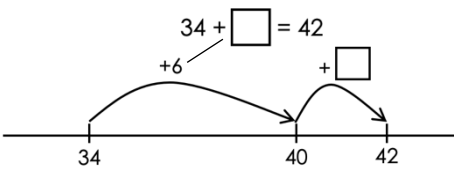
**Go ithutafatsa ga tlhaloganyo motsotso o le 1**

Kgokagano ya dipalo go 10: Polelopallo go tswa go taekeramo ya bara.

<p>Morutabana: Se ke taekeramo ya bara mme e supa gore 7 le 3 di dira 10.</p> <p>Morutabana: 7 tlhakanya le eng ke 10?</p> <p>Barutwana: 3</p> <p>Morutabana: Jaanong, 3 tlhakanya le bokae ke 10?</p> <p>Barutwana: 7</p> <p>Morutabana o supa palelo nngwe le nngwe mo patikwalelo, mme barutwana ba neela palo e e tlogetsweng.</p> <p>Tswelela go botsa barutwana dikae tse dintsi ka molomo o dirisa kgolagano ya dipalo tsa lesome:</p> <p style="padding-left: 20px;">1 + le eng ke 10? Jaanong 9 + le eng 10?</p> <p style="padding-left: 20px;">2 + le eng ke 10? Jaanong 8 + le eng ke 10?</p> <p style="padding-left: 20px;">6 + le eng ke 10? Jaanong 4 + le eng ke 10?</p>	<p>Kwala tse di latelang mo patikwalelo:</p> <table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 50px; height: 30px;">7</td> <td style="width: 50px; height: 30px;">3</td> </tr> <tr> <td colspan="2" style="border: none;"> </td> </tr> <tr> <td colspan="2" style="border: none; text-align: center;">10</td> </tr> </table> <p>Baakanya patikwalelo ka dikai tse:</p> <table style="margin: 10px auto;"> <tr> <td style="border: 1px solid black; padding: 2px;">2</td> <td style="border: 1px solid black; padding: 2px;">8</td> <td style="border: none; padding: 0 10px;"> </td> <td style="border: 1px solid black; padding: 2px;">6</td> <td style="border: 1px solid black; padding: 2px;">4</td> </tr> <tr> <td colspan="2" style="border: none; text-align: center;">10</td> <td style="border: none;"> </td> <td colspan="2" style="border: none; text-align: center;">10</td> </tr> </table> <p>2 + <input style="width: 20px;" type="text"/> = 10</p> <p>8 + <input style="width: 20px;" type="text"/> = 10</p> <p><input style="width: 20px;" type="text"/> + 4 = 10</p> <p>4 + <input style="width: 20px;" type="text"/> = 10</p>	7	3			10		2	8		6	4	10			10	
7	3																
10																	
2	8		6	4													
10			10														

**Tatelano ya Tirwana**

Mo thutong e, re dirisa togamaano ya go kgabaganyetsa go lesome go batla palo e e tlogetsweng go palelo ya tlhakanya.

<p>Dirisa go kgabaganyetsa go lesome go rarabolola <math>34 + \square = 42</math>.</p> <p>Thala molapalo go supa '34' le '42'.</p> <p>Morutabana: Ke katiso ya lesome efe e e latelang morago ga 34?</p> <p>Barutwana: 40</p> <p>Tshwaya '40' mo molapalong.</p> <p>Morutabana: 34 tlhakanya le eng ke 40?</p> <p>Barutwana: 6</p> <p>Kwala '6' mo bolokong e e fa godimo ga motlolo jaaka go supilwe.</p>	<p style="text-align: center;"><math>34 + \square = 42</math></p>  <p style="text-align: center;"><math>34 + \square = 42</math></p>  <p style="text-align: center;"><math>34 + \square = 42</math></p> 
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Fa barutwana ba itemogela mathata ka sekai se, ba botse “4 + le eng ke 10?”

Barutwana ba tshwanetse go araba ‘6’, ba supetse gore se se a tshwana go katiso ya lesome yotlhe:

$4 + 6 = 10$ ;  $14 + 6 = 20$ ;  $24 + 6 = 30$ ;  $34 + 6 = 40$ ...

Morutabana: Go tlhakantswe eng mo go 40 go bona 42?

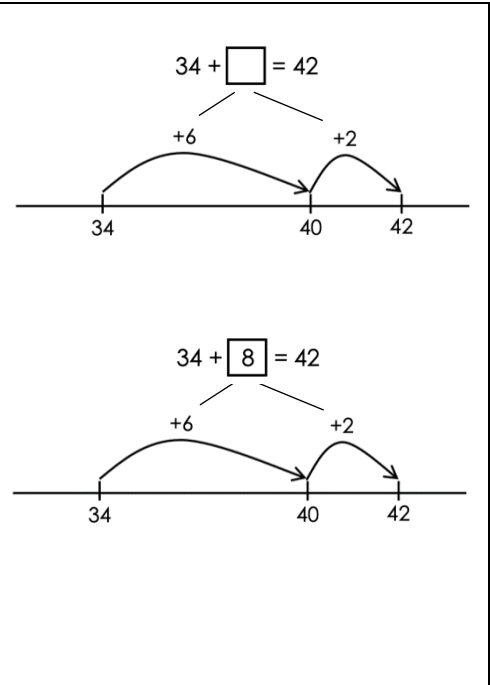
Barutwana: 2

Morutabana: Go tlhakanya 6 le 2 ke eng? (Supa 6 le 2 mo taekaramong)

Barutwana: 8

Morutabana: Jaanong, ke eng se se tlhakantsweng le 34 go bona 42?

Barutwana: 8



**Tirwana ka nosi**

Barutwana ba tshwanetse go leka sekao se se latelang ka tlhaloganyo:

$28 + \square = 35$        $67 + \square = 72$

Barutwana ba tswanetse go tlhalosa go nagana ga bone sk. “Go sekai sa ntlha, katiso ya lesome e e latelang ke 30, jaanong fa ke tlhakanya 2 go bona 30 mme ke tshwanetse go tlhakanya 5 go bona 35. 2 tlhakanya le 5 ke 7.”

Bolelela barutwana ba SE bale ka bo1.

**Tirwana ya gae: Pampiri ya tiro 1**

Kwa pheletsong ya thulaganyo ya gompieno neela barutwana kaedi 1.

O seka wa lebelela nako fa ba dira kaedi e. Maikaelelo ke go fa barutwana tirwana ya go ikatisa ka go kwala se ba se dirileng ka tlhaloganyo.

**Tshegetso ya Vidio**


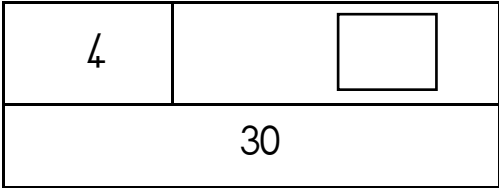
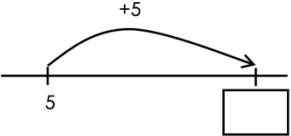
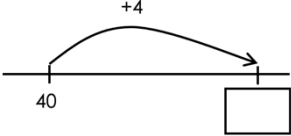
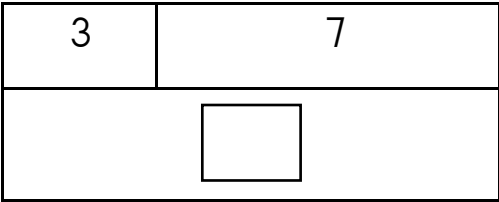
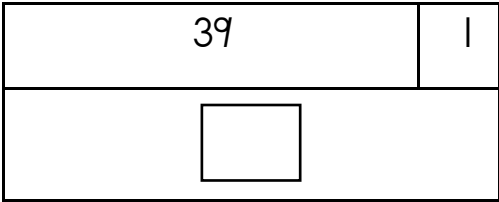
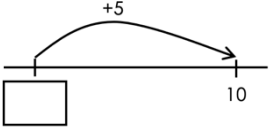
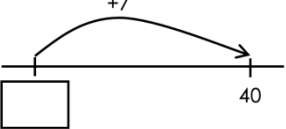
Go kgabaganyetsa go lesome 4



<https://youtu.be/INITWPDMFKY>

Leina:

Go kgabaganyetsa go lesome: Pampiri ya tiro I

1. $6 + 4 = \square$	13. $50 + 6 = \square$
2. $1 + 9 = \square$	14. $50 + 4 = \square$
3. 7 nnye go 10 ke $\square$	15. 8 nnye go 30 ke $\square$
4. $10 = 3 + \square$	16. $20 = 19 + \square$
5. 	17. 
6. 	18. 
7. $10 - 5 = \square$	19. $60 - 4 = \square$
8. $10 - 8 = \square$	20. $60 - 7 = \square$
9. 	21. 
10. $\square + 4 = 10$	22. $\square + 3 = 23$
11. $8 + \square = 10$	23. $30 + \square = 36$
12. 	24. 

**Kelotlhoko go morutabana**

Mo o ka kwala dintlha ka ga thutiso le se barutwana ba tlhokang thuso ka togamaano ya go kgabaganyetsa go lesome, O ka kwala dintlha tse dingwe tse o batlang go di rarabolola mo tshimologong ya thuto e e latelang.

**GO KGABAGANYETSA GO LESOME: TSHIMOLOGO THUTO 5**

**Go ithutafatsa ga tlhaloganyo motsotso o le 1**

a. Go tlolela go katiso ya lesome pele

Se ga se go atametsa go lesome le le gaufi mme ke go tlolela pele go katiso ya lesome mo molapalong

“Neela ka katiso ya lesome e e tlang pele go ...”

Morutabana: 26 → Barutwana: 20

Morutabana: 53 → Barutwana: 50 jalojalo...

b. Go ntsha go katiso ya lesome

“Ke eng...?”

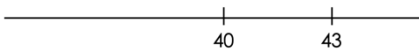

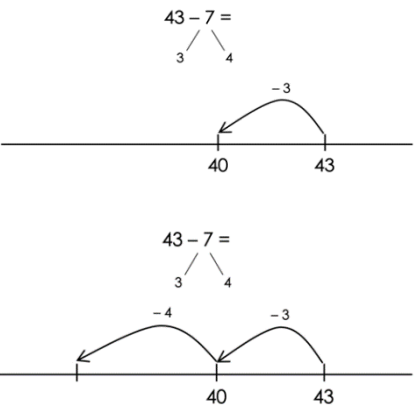
Morutabana: 30 – 6 → Barutwana: 24

Morutabana: 50 – 2 → Barutwana: 48

Morutabana: 70 – 5 → Barutwana: 65 jalojalo...

**Tirwana tatelano**

Mo thutong e re dirisa togamaano ya go kgabaganyetsa go lesome go rarabolola palelo ya go ntsha.

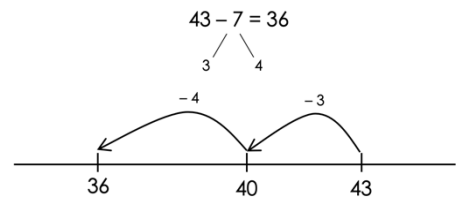
<p>Palelo: <math>43 - 7</math>                  Kwala '<math>43 - 7 =</math>' mo patikwalelo.                  Thala molapalo go supa se se tshwailweng '<math>43</math>'.                  Morutabana: Re a tlosa ka jalo re tlhoka go tlolela kwa morago. Ke katiso ya lesome efe e e tlang pele ga <math>43</math>?                  Barutwana: 40                  Morutwana o tshwanetse go tla go tshwaya mola.</p>	<p><math>43 - 7 =</math></p> 
<p>Morutabana: Re tshwanetse go tlolela morago ga 7. Dira motlolo o le mongwe go katiso ya lesome go na le bo balela morago ka bo1. <math>43</math> ntsha eng e go fa <math>40</math>?                  Barutwana: 3</p>	<p><math>43 - 7 =</math></p> 
<p>Morutabana: Re ntshitse/tlositse 3. Re tlhoka go ntsha supa. 7 e kgaogantswe ka 3 le eng?                  Barutwana: 4                  Kgaoganya 7 go <math>43 - 7</math> mo go 3 le 4.                  Morutabana: Re tlhoka di le kae gape go ntsha?                  Barutwana: 4</p>	<p><math>43 - 7 =</math></p> 

Morutabana: Ke eng 40 ntsha 4?

Barutwana: 36

Morutabana: Ka jalo,  $43 - 7 = 43 - 3 - 4 = 36$ .

Rekota tharabololo go molapalo.



### Tirwana ka nosi

Barutwana ba tshwanetse go leka sekao se se latelang ka tlhaloganyo:

$$54 - 6 \quad 63 - 5$$

Barutwana ba tswanetse go tlhalosa go nagana ga bone sk. . "54 - 6, ke ntsha 4 go 54 go bona 50, jaanong ntsha 2, ka jalo karabo ke 48."

Bolelela barutwana ba SE bale ka bo1.

Bana ba ba itemogelang mathata go dira se ka tlhaloganyo ba ka nna ba taka molapalo o o makgwarakgwara go ba thusa.

### Tshegetso ya Vedio

Go kgabaganyetsa go lesome 5



<https://youtu.be/-bQNTOPly7I>

**Tshegetso ya Vidio**

Go kgabaganyetsa go lesome 6



<https://youtu.be/JvNKtAdrzm>

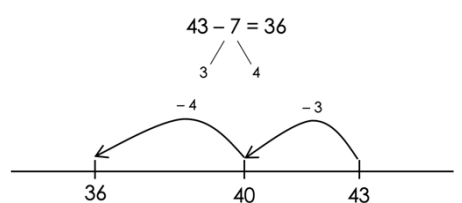
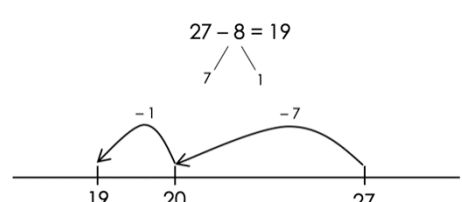


**GO KGABAGANYETSA GO LESOME: TSHIMOLOGO THUTO 6****Go ithutafatsa ga tlhaloganyo motsotso o le 1**

- a. Go tlolela go katiso ya lesome **pele** (sk.  $23 \rightarrow 20$ ;  $56 \rightarrow 50$ )  
 b. Go ntsha go katiso ya lesome (sk.  $30 - 3 \rightarrow 27$ ;  $40 - 6 \rightarrow 34$ )

**Tirwana tatelano**

Mo thutong e re dirisa togamaano ya go kgabaganyetsa go lesome go rarabolola palelo ya go ntsha.

<p>Bolelela barutwana go gopola go tloga maabane: Re ranolotse jang <math>43 - 7</math>?</p> <p>Simolola ka go thala mola mme o tshwaye ntlha ka '43'.</p> <p>Letlelela barutwana ba tlhalose togamaano le gore e bereka jang le go e bontsha mo patikwalelo</p>	<p>Setshwantsho se se tletseng sa bofelo se ka fa tlase:</p> 
<p>Ka jalo, bontsha mo patikwalelong gore re dirisa jang go kgabaganyetsa go ten go rarabolola: <math>27 - 8</math></p> <p>Simolola ka go thala mola le go tshwaya ntlha e bontsha '27' le go rarabolola bothata o dirisa togamaano ya go kgabaganyetsa go lesome.</p>	<p>Setshwantsho se se tletseng sa bofelo se ka fa tlase:</p> 

**Tirwana ka nosi**

Barutwana ba tshwanetse go leka sekao se se latelang ka tlhaloganyo:  $35 - 7$   
 Barutwana ba tswanetse go tlhalosa go nagana ga bone sk. "go  $35 - 7$ , ke dirile  $35 - 5$  go bona 30, mme jaanong ka ntsha 2, go bona 28."  
 Bolelela barutwana ba SE bale ka bo1.  
 Bana ba ba itemogelang mathata go dira se ka tlhaloganyo ba ka nna ba taka molapalo o o makgwakgwa go ba thusa.  
 Neela ba ba fetsang ka bonako tiro e ntsi go ikatisa:  
 $42 - 8$                        $62 - 6$                        $84 - 7$

<p>Bolelela barutwana go gopola go tloga maabane: Re ranolotse jang <math>36 + 7</math>?</p> <p>Simolola ka go thala mola mme o tshwaye ntlha ka '36'.</p> <p>Morutabana: Re a tlhakanya ka jalo re tlhoka go tlolela kwa pele. Katsanetswe ya lesome e e latelang morago ga 36 ke efe?</p> <p>Barutwana: 40</p> <p>Morutwana o tshwanetse go tla go tshwaya mola.</p> <p>Letlelela barutwana go tlhalosa mokgwa le gore o bereka jang le go o supa mo patikwalelo</p>
<p>Jaanong, supa mo patikwalelo gore o kgabaganyetsa go lesome jang go rarabolola: <math>27 + 8</math></p> <p>Simolola ka go thala mola mme o tshwaye ntlha ka '27' mme o rarabolole palo o dirisa togamaano ya go kgabaganyetsa go lesome.</p>

**Tshegetso ya Vidio**

Go kgabaganyetsa go lesome 7



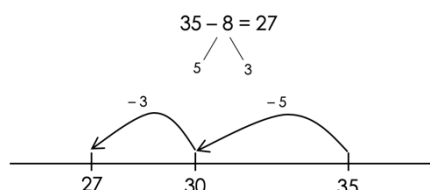
[https://youtu.be/npm\\_pVwiXD4](https://youtu.be/npm_pVwiXD4)

**GO KGABAGANYETSA GO LESOME: TSHIMOLOGO THUTO 7****Go ithutafatsa ga tlhaloganyo motsotso o le 1**

- a. Go tlolela go katiso ya lesome **pele** (e.g.  $23 \rightarrow 20$ ;  $56 \rightarrow 50$ )  
 b. Go ntsha go tswa go katiso ya lesome (e.g.  $30 - 3 \rightarrow 27$ ;  $40 - 6 \rightarrow 34$ )

**Tirwana Tatelano**

Mo thutong e re dirisa togamaano ya go kgabaganyetsa go lesome go rarabolola palelo ya go ntsha.

<p>Bontsha mo patikwalelo re dirisa go kgabaganyetsa go lesome jang go rarabolola: <math>35 - 8</math></p> <p>Simolola ka go thala mola go tshwaya ntlha e bontsha '35'.</p> <p>Rarabolola bothata o dirisa togamaano ya go kgabaganyetsa go lesome.</p>	<p>Setshwantsho se se tletseng sa bofelo se ka fa tlase:</p> 
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**Tirwana ka nosi**

Barutwana ba tshwanetse go leka sekao se se latelang ka tlhaloganyo:

$$25 - 8 \quad 36 - 7$$

Barutwana ba tswanetse go tlhalosa go nagana ga bone sk. "Go  $25 - 8$ , ke dirile  $25 - 5$  go bona 20, mme ka tlosa 3 go bona 17".

Bolelela barutwana ba SE baleka bo1.

Barutwana ba ba itemogelang mathata go dira se ka tlhaloganyo, ba ka kgwarakgwara molapalo go ba thusa. Neel aba ba feditseng ka pele tiro e nngwe go ikatisa.

$$73 - 6 \quad 142 - 8 \quad 81 - 4$$



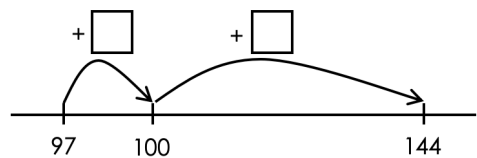
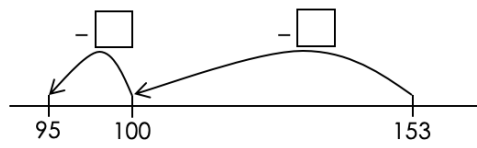
**Tirwana ya gae: Pampiri ya tiro 2**

Kwa pheletsong ya thulaganyo ya gompieno neela barutwana kaedi 2.

O seka wa lebelela nako fa ba dira tiro e. Maikaelelo ke go fa barutwana tirwana ya go ikatisa ka go kwala se ba se dirileng ka tlhaloganyo.

Leina:

Go kgabaganyetsa go lesome: Pampiri ya tiro 2

1. $45 + 8 = \square$	
2. $54 - 6 = \square$	
3. $26 + \square = 34$	
4. $27 + \square = 27 + 3 + 5$	
5. $32 + 9 = 32 + 8 + \square$	
6. $67 + 6 = 67 + 3 + \square$	
7. $44 + \square = 44 + 6 + 23$	
8. $32 - \square = 32 - 2 - 5$	
9. 	
$97 + \square + \square = 144$	
10. 	
$153 - \square - \square = 95$	

**Kelotlhoko go morutabana**

Mo o ka kwala dintlha ka ga thutiso le se barutwana ba tlhokang thuso ka togamaano ya go kgabaganyetsa go lesome, O ka kwala dintlha tse dingwe tse o batlang go di rarabolola mo tshimologong ya thuto e e latelang.

**GO KGABAGANYETSA GO LESOME: TSHIMOLOGO THUTO 8**

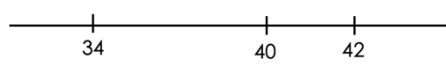
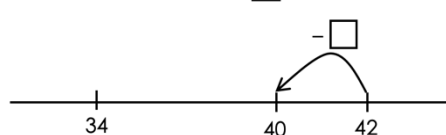
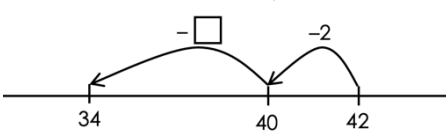
**Go ithutafatsa ga tlhaloganya motsotso o le 1**

Dikgolagano tsa 10: Polelopalo go tswa go taekeramo ya bara

<p>Morutabana: Se ke taekeramo ya bara mme e bontsha gore 7 le 3 di dira 10.</p> <p style="padding-left: 40px;">Re kgona le go bona gore <math>10 - 7 = 3</math> ka go lebelela taekeramo.</p> <p>Morutabana: Ka jalo 10 ntsha eng ke 3?</p> <p>Barutwana: 7</p> <p>Morutabana: Jaanong, 10 ntsha eng ke 7?</p> <p>Barutwana: 3</p> <p>Morutabana o kaya go palelo nngwe le nngwe mo patikwalelo mme barutwana ba neela palo e e tlogetsweng.</p> <p>Tswelela ka go botsa barutwana dikai tse dintsi ka molomo o dirisa dikgolagano tsa lesome:</p> <p style="padding-left: 40px;">10 ntsha eng ke 1? 10 ntsha eng ke 9?</p> <p style="padding-left: 40px;">10 ntsha eng ke 2? 10 ntsha eng ke 8?</p> <p style="padding-left: 40px;">10 ntsha eng ke 4? 10 ntsha eng ke 6?</p>	<p>Kwala se se latelang go patikwalelo:</p> <div style="text-align: center; border: 1px solid black; width: 100px; margin: 0 auto; padding: 5px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; border: 1px solid black; text-align: center; padding: 5px;">7</td> <td style="width: 50%; border: 1px solid black; text-align: center; padding: 5px;">3</td> </tr> <tr> <td colspan="2" style="border: 1px solid black; text-align: center; padding: 5px;">10</td> </tr> </table> </div> <p>Baakanya patikwalelo ka dikai tse:</p> <div style="display: flex; justify-content: space-around; margin: 10px 0;"> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td style="width: 20px;">2</td><td style="width: 20px;">8</td></tr> <tr><td colspan="2" style="border-top: 1px solid black; border-bottom: 1px solid black;">10</td></tr> </table> <table border="1" style="border-collapse: collapse; text-align: center;"> <tr><td style="width: 20px;">6</td><td style="width: 20px;">4</td></tr> <tr><td colspan="2" style="border-top: 1px solid black; border-bottom: 1px solid black;">10</td></tr> </table> </div> <p><math>10 - \square = 6</math></p> <p><math>10 - \square = 4</math></p> <p><math>10 - \square = 2</math></p> <p><math>10 - \square = 8</math></p>	7	3	10		2	8	10		6	4	10	
7	3												
10													
2	8												
10													
6	4												
10													

**Tatelano ya tirwana**

Mo thutong e, re dirisa togamaano ya go kgabaganyetsa go lesome go bona palo e e tlogetsweng go palelo ya go ntsha.

<p>Dirisa go kgabaganyetsa go lesome go rarabolola</p> <p><math>42 - \square = 34</math></p> <p>Taka molapola go bontsha '42' and '34'.</p> <p>Morutabana: Katiso ya lesome pele ga 42 ke eng?</p> <p>Barutwana: 40</p> <p>Tshwaya '40' mo molapalong.</p> <p>Morutabana: 42 ntsha eng ke 40?</p> <p>Barutwana: 2</p> <p>Kwala '2' mo bolokong jo bo mo godimo ga motlolo.</p> <p>Morutabana: Re ntsha eng mo go 40 go bona 34?</p> <p>Barutwana: 6</p> <p>Fa barutwana ba itemogela mathata ka sekai se, ba botse, "10 ntsha eng ke 4?"</p>	<div style="text-align: center; margin-bottom: 20px;"> <p><math>42 - \square = 34</math></p>  </div> <div style="text-align: center; margin-bottom: 20px;"> <p><math>42 - \square = 34</math></p>  </div> <div style="text-align: center;"> <p><math>42 - \square = 34</math></p>  </div>
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Barutwana ba tshwanetse go kgona go araba '6', ka jalo ba bontshe gore se se tshwana ka dikatiso tsa lesome tsotlhe;

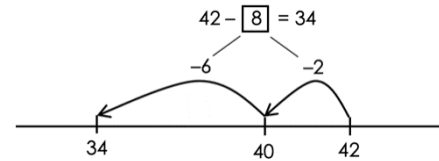
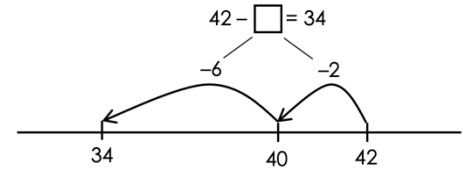
Ka jalo:  $10 - 6 = 4$ ;  $20 - 6 = 14$ ;  $30 - 6 = 24$ ;  $40 - 6 = 34$  jj.

Morutabana: Ke eng 6 tlhakanya le 2? (Supa 6 le 2 mo taekeramong)

Barutwana: 8

Morutabana: Ka jalo, 42 ntsha eng ke 34?

Barutwana: 8



### Tirwana ka nosi

Barutwana ba tshwanetse go leka sekao se se latelang ka tlhologanyo:

$$35 - \square = 28 \quad 72 - \square = 67$$

Barutwana ba tshwanetse go tlhalosa go nagana ga bone sk "go  $35 - \square = 28$ , katiso ya lesome pele ga 35 ke 30, Ka jalo ke ntsha 5 go bona 30 mme jaanong ke tshwanetse go ntsha 2 go bona 28. 5 tlhakanya 2 ke 7."

Bolelela barutwana ba SE bale ka bo1.

Barutwana ba ba itemogelang mathata go dira se ka tlhologanyo, ba ka nna ba kgwarakgwara molapalo go ba thusa.

### Tshegetso ya Vidio

Go kgabaganyetsa go lesome 8



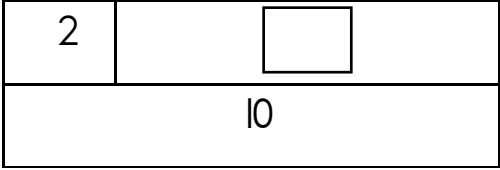
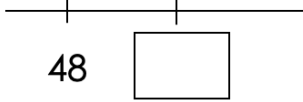
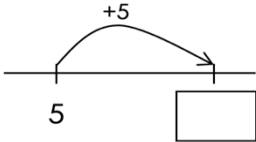
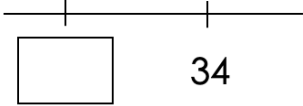
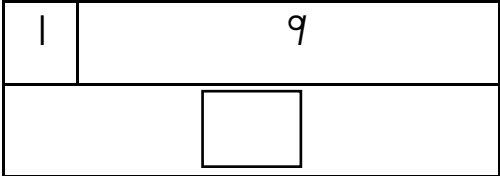
<https://youtu.be/9YSloijDOso>

Leina:

Go kgabaganyetsa go lesome: Tlhatlhobo ya bofelo

Karolo I

Metsotso e le 2

1. $6 + 4 = \square$	11. $50 + 7 = \square$
2. $2 + 8 = \square$	12. $3 + 60 = \square$
3. $10 = 7 + \square$	13. $40 - 7 = \square$
4. 8 nnye go 10 ke $\square$	14. $40 + 8 = \square$
5. 	15. Katiso ya lesome e e latelang ke eng? 
6. 	16. $100 + 27 = \square$
7. $10 - 5 = \square$	17. Katiso ya 10 pele ga 34 ke eng? 
8. $10 - 3 = \square$	18. $\square + 8 = 50$
9. 	19. $30 - \square = 27$
10. $\square + 10 = 10$	20. $87 = 80 + \square$

Maduo otlhe go tswa go 20

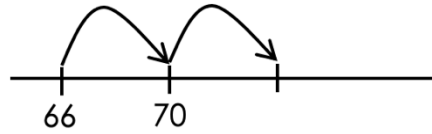


Go kgabaganyetsa go lesome: Tlhatlhobo ya bofelo

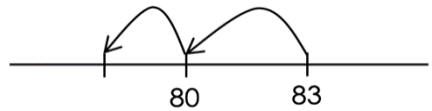
Karolo 2

Metsotso e le 3

1.  $66 + 8 = \square$



2.  $83 - 5 = \square$



3.  $93 - 7 = \square$

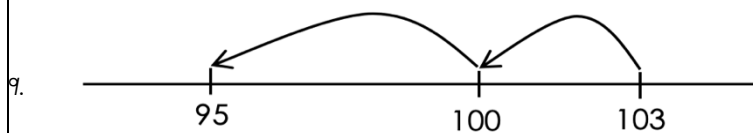
4.  $67 + \square = 73$

5.  $\square + 7 = 82$

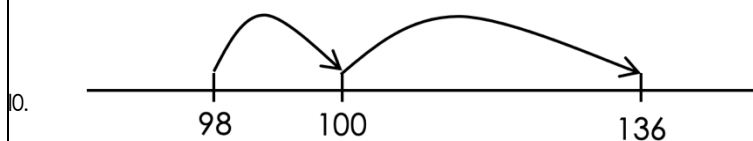
6.  $67 + 5 = 67 + 3 + \square$

7.  $94 - \square = 94 - 4 - 2$

8.  $98 + 56 = 98 + 2 + \square$



9.  $103 - \square = 95$



10.  $98 + \square = 136$

Maduo otlhe go tswa go 10

## DITOGAMAANO TSA GO TLOLA

### Matseno

Tsepamo mo tshimologong ya dithuto tsa ntlha tse nne ke go tlhakanya o dirisa ditogamaano tsa go tlola. Mo tshimologong ya dithuto tse nne tse di latelang, tsepamo e mo go ntsheng o dirisa ditogamaano tsa go tlola. Dingwe tsa ditirwana di etelwa pele ke morutabana mo patikwalelo, tse dingwe ke tsa barutwana go dira k abo bona.

### Bokgoni ba go gopola ka bonako

Go na le mekgwa e le merataro ya bokgoni ba go gopola ka bonako e barutwana ba tshwanetseng go ithuta ka ditogamaano tsa go tlola:

- bala ka go tswelela kgotsa go ya morago ka bo-10 go tswa go palo nngwe le nngwe (sk. 12, 22, 32, kgotsa 57, 47, 37, ...)
- tlhakanya kgotsa tlosa 10 go tswa go palo nngwe le nngwe (sk.  $43 + 10 = 53$  kgotsa  $89 - 10 = 79$ )
- tlhakanya katiso ya lesome go tswa go palo nngwe le nngwe (sk.  $61 + 20 = 81$ )
- tlosa katiso ya lesome go tswa go palo nngwe le nngwe (sk.  $46 - 30 = 16$ )
- tlolela go katiso ya lesome e e latelang morago ga palo (sk.  $32 \rightarrow 40$ )
- tlolela go katiso ya lesome pele ga palo (e.g.  $56 \rightarrow 50$ )

Leina:

Ditogamaano tsa go tlola: Thatlhobo-pele

Karolo I

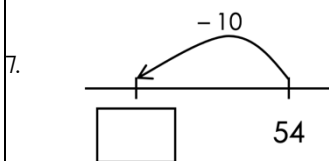
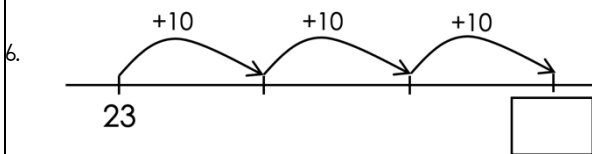
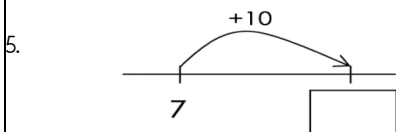
Metsotso e le 2

1. Tsenya palo e e tlogetsweng.  
14, 24, 34, 44,

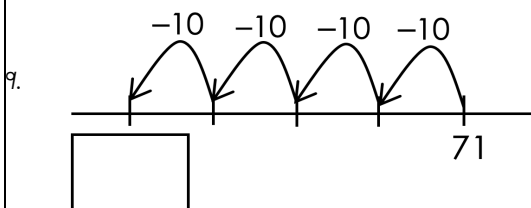
2. Tsenya palo e e tlogetsweng.  
79, 69, 59, 49,

3.  $6 + 30 =$

4.  $57 - 10 =$

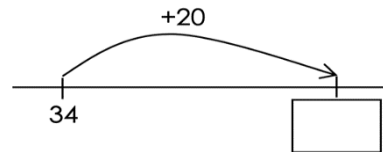
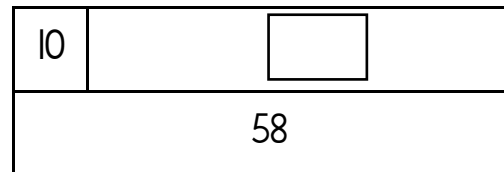
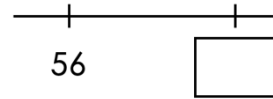


8.  $36 +$    $= 40$



10.  $31 - 20 =$

11. Katiso ya 10 e e latelang ke eng?



14.  $16 + 30 =$

15. Katiso ya 10 e e tlang pele ga 48 ke eng?



16.  $79 - 40 =$

17.  $38 -$    $= 18$

18.   $- 20 = 69$

19.  $37 +$    $= 77$

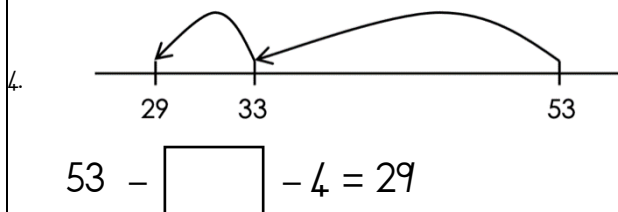
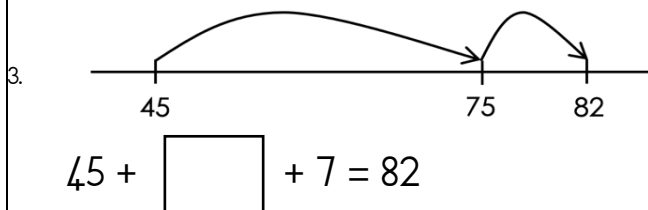
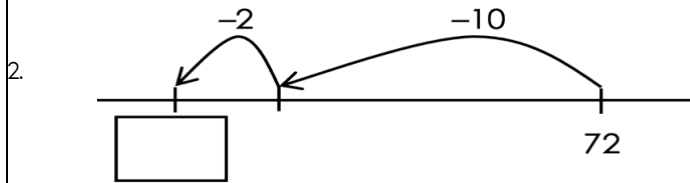
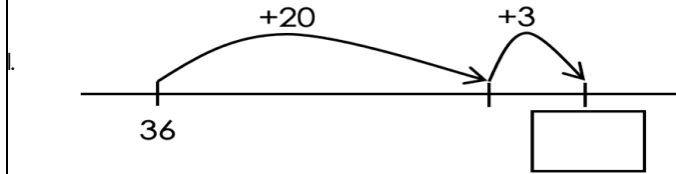
20.   $+ 20 = 66$

Maduo otlhe go tswa go 20

## Ditogamaano tsa go tlola: Thatlhobo-pele

KAROLO 2

Metsotso e le 3



5.  $57 + 26 = \square$

6.  $83 - 24 = \square$

7.  $19 + \square = 41$

8.  $62 - \square = 47$

9.  $61 - 32 = 61 - \square - 2$

10.  $74 - \square = 74 - 20 - 5$

Maduo otlhe go tswa go 10

## DITOGAMAANO TSA GO TLOLA: TSHIMOLOGO THUTO 1

### Go ithutafatsa ga tlhaloganyo motsotso o le 1

a. Dikologa phaposiborutelo ga 10 go feta (Phaposi yotlhe e ka araba ka go refosana)

Morutabana o bua nomoro, barutwana mo phaposing ba araba ka go refosana ka 10 le le fetang go tswa mo nomorong ya bofelo.

Morutabana: 16

Morutwana 1: 26 → Morutwana 2: 36 → Morutwana 3: 46 → Morutwana 4: 56  
jalojalo.

b. Dikologa phaposiborutelo ga 10 tlase (Phaposi yotlhe e ka araba ka go refosana)

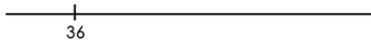
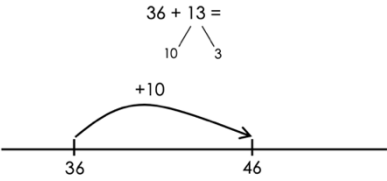
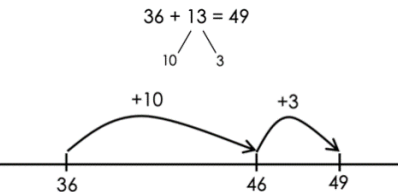
Morutabana o bua nomoro, barutwana mo phaposing ba araba ka go refosana ka 10 tlase go tswa mo nomorong ya bofelo.

Morutabana: 128

Morutwana 1: 118 → Morutwana 2: 108 → Morutwana 3: 98 → Morutwana 4: 88  
jalojalo.

### Tatelano ya Tirwana

Go thuto e, re tliša togamaano ya go tlola go rarabolola mathata a go tlhakanya.

<p>Bothata: <math>36 + 13</math></p> <p>Kwala '<math>36 + 13 =</math>' mo patikwalelo.</p> <p>Polota 36 gaufi le tshimologo ya mola (ka gore go tlhakanya go raya gore re ya go tlolela kwa pele).</p>	<p><math>36 + 13 =</math></p> 
<p>Morutabana: Re tshwanetse go tlolela kwa pele ga 13. A re tlhatlhamolole 13 ka 10 le 3.</p> <p><math>36 + 10</math> ke eng?</p> <p>Barutwana: 46</p> <p>Thala metlolo e +10, e e fitlhelang go 46.</p>	<p><math>36 + 13 =</math></p> 
<p>Morutabana: Re santse re tlolela kwa pele ga 3. 46 tlhakanya 3 ke eng?</p> <p>Barutwana: 49</p> <p>Kwala mo molapalong jaaka e bontsha.</p> <p>Morutabana: Re latela dikgato tse:</p> <ul style="list-style-type: none"> <li>• Re <b>polota</b> nomoro ya ntlha</li> <li>• Re <b>tlhatlhamolola</b> nomoro ya bobedi e re e tlhakanyang</li> <li>• Re <b>tlola</b> bomasome mme re latele ka bonngwe/metso</li> <li>• Re neela <b>karabo</b></li> </ul> <p>Morutabana: Ka jalo <math>36 + 13</math> e tshwana le <math>36 + 10 + 3 = 49</math> ka gonne re tlhakantse 13 ka go</p>	<p><math>36 + 13 = 49</math></p>  <p><math>36 + 10 + 3 = 49</math></p>

tlhakanya pele 10 le 3 morago. Kwala polelopalo jaaka e bontshitswe.	
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### **Tirwana ka nosi**

Barutwana ba tshwanetse go leka sekao se se latelang ka tlhaloganyo:

$$64 + 12 \quad 24 + 15$$

Barutwana ba tswanetse go tlhalosa go nagana ga bone, sk. “go  $64 + 12$ , ke tlhakanya 10 go 64 go bona 74, ka jalo ke tlhakanya le 2, jaanong karabo 76.”

Bolelela barutwana ba SE bale ka bo1.

Bana ba ba itemogelang mathata go dira se ka tlhaloganyo ba ka nna ba taka molapalo o o makgwakgwa go ba thusa.

### **Tshegetso ya Vidio**

Ditogamaano tsa go tlola 1



<https://youtu.be/FPTVoIFFd3k>

## DITOGAMAANO TSA GO TLOLA: TSHIMOLOGO THUTO 2

## Go thutafatsa ga tlhaloganyo motsotso o le 1.

Pop Fizz: 10 go feta kgotsa 10 go nnye

a. Morutabana a re 'pop', barutwana ba re 'fizz'; morutabana o bua nomoro, barutwana ba araba ka **10 go feta** (kgotsa katiso ya 10 go feta):

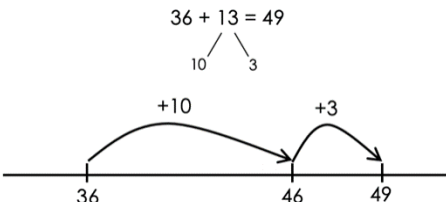
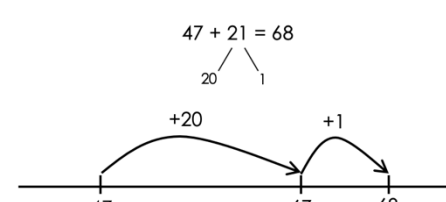
Morutabana: pop	→	Barutwana: fizz	
Morutabana: 3	→	Barutwana: 13	
Morutabana: pop	→	Barutwana: fizz	
Morutabana: 53	→	Barutwana: 63	jalojalo....

b. Morutabana a re 'pop', barutwana ba re 'fizz'; morutabana o bua nomoro, barutwana ba araba ka **10 go nnye** (kgotsa katiso ya 10 go nnye):

Morutabana: pop	→	Barutwana: fizz	
Morutabana: 49	→	Barutwana: 39	
Morutabana: pop	→	Barutwana: fizz	
Morutabana: 78	→	Barutwana: 68	jalojalo....

## Tatelano ya Tirwana

Mo thutong e, re dirisa togamaano ya go tlola go rarabolola mathata a tlhakanya.

<p>Kopa barutwana ba leke go gopola go tswa maabane: Go rarabolotse jang <math>36 + 13</math>? Simolola ka go thala mola mme o tshwaye ntlha ka '36'.</p> <p>Letlelela barutwana ba tlhalosa mokgwa go yo a dutseng le ena, mme o kope para e le nngwe go e bontsha mo patikwalelo.</p> <p>Gopotsa barutwana dikgato tse ba di ithutileng go thuto e e fetileng: <b>polota, tihatlhamolola, tlola le karabo.</b></p>	<p>Setshwantsho se se tletseng sa bofelo se bontshiwa fa tlase:</p> 
<p>Jaanong, bontsha mo patikwalelo gore o dirisa ditogamaano tsa go tlola jang go rarabolola: <math>47 + 21</math></p> <ul style="list-style-type: none"> <li>• <b>Polota</b> 47 mo molapalong.</li> <li>• <b>Tihatlhamolola</b> 21 go 20 le 1</li> <li>• <b>Tlolela</b> kwa pele le ga 20 le go <b>tlolela</b> 1 kwa pele. Barutwana bangwe ba tla tlolela kwa pele metlolo e mebedi ya lesome go na le go tlolela kwa pele motlolo o le mongwe wa 20 – go ntse go nepagetse.</li> <li>• Neela <b>karabo.</b></li> </ul> <p>Morutabana: Ka jalo <math>47 + 21</math> e tshwana le <math>47 + 20 + 1 = 68</math></p> <p>Kwala polelopalo jaaka go bontshitswe.</p>	<p>Setshwantsho se se tletseng sa bofelo se bontshiwa fa tlase:</p>  <p><math>47 + 20 + 1 = 68</math></p>

### **Tirwana ka nosi**

Barutwana ba tshwanetse go leka sekao se se latelang ka tlhaloganyo:

$$43 + 24 \quad 31 + 25$$

Barutwana ba tswanetse go tlhalosa go nagana ga bone, sk. “go  $43 + 24$ , ke tlhakanya 20 go bona 63, ke tlhakanye le 4, ka jalo karabo ke 67.”

Bolelela barutwana ba SE bale ka bo1.

Bana ba ba itemogelang mathata go dira se ka tlhaloganyo ba ka nna ba taka molapalo o o makgwakgwa go ba thusa.

### **Tshegetso ya Vidio**

Ditogamaano tsa go tlola 2



<https://youtu.be/6RkP5bSpINQ>



**Tshegetso ya Vidio**

Ditogamaano tsa go tlola 3



<https://youtu.be/JAGey218ADw>

## DITOGAMAANO TSA GO TLOLA: TSHIMOLOGO THUTO 3

## Go ithutafatsa ga tlhaloganyo motsotso o le 1.

Pop-Fizz: 10 go feta le 10 go nnye; 20 go feta le 20 go nnye

## Tatelano ya tirwana

Mo thutong e, re atolosa ditogamaano tsa go tlola ka go tsenya kgato ya go kgabaganyetsa go lesome.

Bontsha mo patikwalelo gore re dirisa ditogamaano tsa go tlola jang go rarabolola:  $35 + 16$

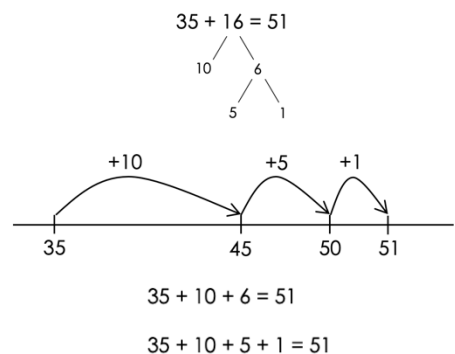
Kwala polelopalo mo patikwalelo mme o thale molapalo o o lolea kgotsa o o senang sepe

- **Polota** 35 mo molapalong.
- **Tlhatlhamolola** 16 go 10 le 6
- **Tlolela** kwa pele ga 10 go fitlha go 45. **Tlola** 6 e e setseng ka go kgabaganyetsa go katiso ya 10 e e latelang (se ke 50). Jaanong 6 e tlhoka go tlhatlhamololwa go 5 le 1. **Tlolela** kwa pele ka 5 le 1.
- Neela **karabo**.

Morutabana: Jaanong  $35 + 16$  e tshwana le  $35 + 10 + 6 = 51$  kgotsa  $35 + 10 + 5 + 1 = 51$ .

Kwala polelopalo jaaka e bontshitswe.

Setshwantsho sa bofelo se se feletseng se bontshitswe mo tlase:



## Tirwana ka nosi

Barutwana ba tshwanetse go leka sekao se se latelang ka tlhaloganyo:

$$39 + 23 \quad 68 + 35$$

Barutwana ba tshwanetse go tlhalosa go nagana ga bone, sk. "go  $39 + 23$ , ke tlhakanya 20 go 39 go bona 59, ke tlhakanya 1 go bona 60, le 2, jaanong karabo ke 62."

Bolelela barutwana ba SE bale ka bo1.

Neela barutwana ba ba fetsang ka bonako ikatiso e e okeditsweng:

$$36 + 28 \quad 47 + 34$$

**DITOGAMAANO TSA GO TLOLA: TSHIMOLOGO THUTO 4****Go ithutafatsa ga tlhaloganyo motsotso o le 1.**

Go tlolela go katiso ya lesome e e **latelang**

Se ga se go atametsa go lesome le le gaufi mme ke go tlolela go katiso ya lesome e e **latelang** mo molapalong.

“Katiso ya lesome e e **latelang morago** ke eng ...?”

Morutabana: 47

→

Barutwana: 50

Morutabana: 55

→

Barutwana: 60

Morutabana: 32

→

Barutwana: 40

jalojalo...

**Tatelano ya Tirwana**

Mo thutong e, re dirisa ditogamaano tsa go tlola go rarabolola palo e e tlogetsweng.

Bontsha mo patikwalelong gore re dirisa ditogamaano tsa go tlola jang go rarabolola  $23 + \square = 37$  jaaka go latela:

Kwala polelopalo mo patikwalelo mme o thale molapalo o o senang sepe kgotsa o o lolea.

Polota '23' mo molapalong.

Morutabana: Re tlhoka go tlolela kwa pele go 37.

Tshwaya 37 mo molapalong.

Morutabana: Re tshwanetse ra dira motlolo wa bolesome le motlolo wa bonngwe ofe?

Barutwana: Tlola 10 go bona 33 mme o tlole 4 go bona 37.

Thala metlolo e mo molapalong.

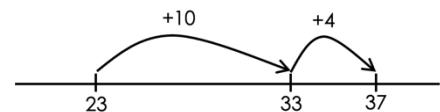
Morutabana: Re tlodile ga kae gotlhelele?

Barutwana: 14

Kwala 14 mo bolokong.

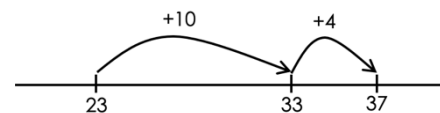
Morutabana: Jaanong  $23 + 10 + 4$  e tshwana le  $23 + 14 = 37$ .

$$23 + \square = 37$$



$$23 + \boxed{14} = 37$$

10      4

**Tirwana ka nosi**

Barutwana ba tshwanetse go leka sekao se se latelang ka tlhaloganyo:

$$45 + \square = 67$$

$$67 + \square = 81$$

Barutwana ba tshwanetse go tlhalosa go nagana ga bone sk. “go  $45 + \square = 67$ , ke tlhakanya 20 go 45 go bona 65, ke tlhakanya le 2 go bona 67, jaanong go tlola gotlhelele ke 22.” Bolelela barutwana ba SE bale ka bo1.

Neela barutwana ba ba fetsang ka bonako ikatiso tse dintsi:

$$45 + \square = 68$$

$$67 + \square = 83$$

**Tirwana ya gae: Tiro 1**

Kwa pheletsong ya thulaganyo ya gompieno neela barutwana tiro 1.

O seka wa lebelela nako fa ba dira tiro e. Maikaelelo ke go fa barutwana tiro ya go ikatisa ka go kwala se ba se dirileng ka tlhaloganyo.

**Tshegetso ya Vidio**

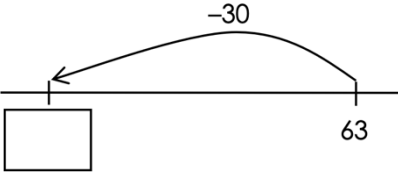
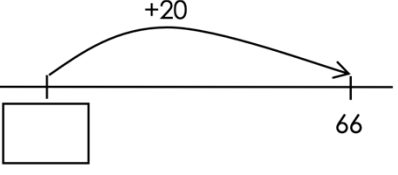
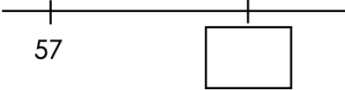
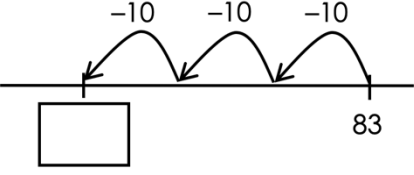
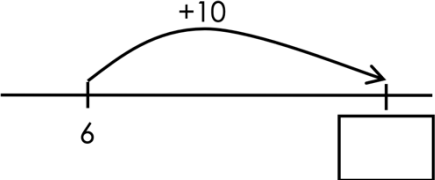
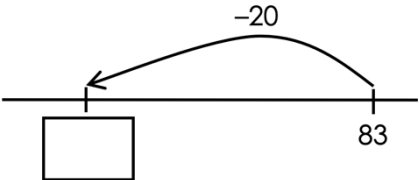
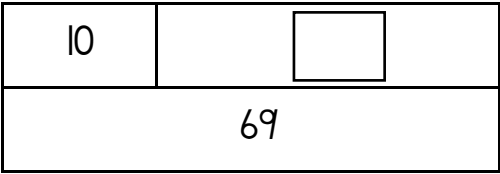
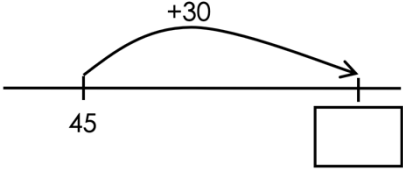
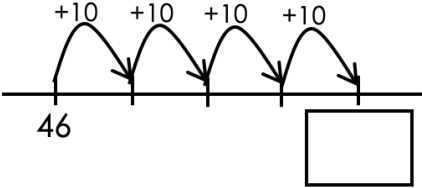
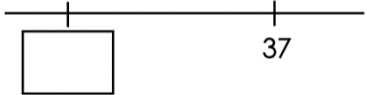
Ditogamaano tsa go tlola 4



<https://youtu.be/A9vFXHWkzUo>

Leina:

Ditogamaano: Pampiri ya tiro I

<p>1. <math>75 - 10 = \square</math></p>	<p>11. <math>14 + 50 = \square</math></p>
<p>2. </p>	<p>12. </p>
<p>3. 17 27 37 <math>\square</math> 57</p>	<p>13. 86 76 66 56 <math>\square</math></p>
<p>4. <math>47 + \square = 50</math></p>	<p>14. <math>68 - \square = 8</math></p>
<p>5. Katiso ya 10 e e latelang ke eng?</p> <p></p>	<p>15. </p>
<p>6. </p>	<p>16. </p>
<p>7. <math>52 - 20 = \square</math></p>	<p>17. <math>4 + 50 = \square</math></p>
<p>8. </p>	<p>18. </p>
<p>9. </p>	<p>19. Katiso ya 10 e e kwa pele ke eng?</p> <p></p>
<p>10. <math>45 + \square = 85</math></p>	<p>20. <math>97 - 60 = \square</math></p>

**Kelotlhoko go morutabana**

Mo o ka kwala dintlha ka ga thutiso le ka se barutwana ba santseng ba tlhoka thuso ka sona ka ditogamaano tse di farologaneng. O ka kwala dintlha tse dingwe tse o batlang go di rarabolola mo tshimologong ya thuto e e latelang.

**Tshegetso ya Vidio**

Ditogamaano tsa go tlola 5



<https://youtu.be/dFV5gmY68Sc>


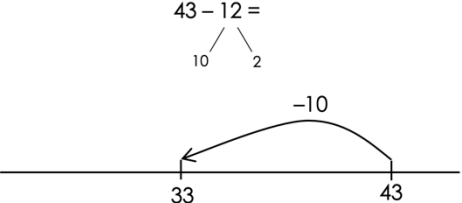
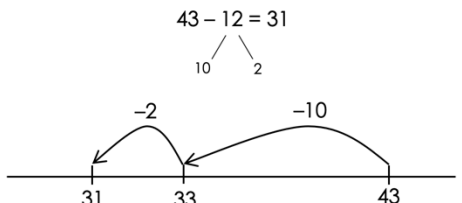
## DITOGAMAANO TSA GO TLOLA: TSHIMOLOGO THUTO 5

## Go ithutafatsa ga tlhaloganyo motsotso o le 1

- a. Dikologa phaposiborutelo 10 go feta  
b. Dikologa phaposiborutelo 10 go nnye

## Tatelano ya Tirwana

Go thuto e re dirisa ditogamaano tsa go tlola go rarabolola dipalelo tsa go ntsha.

<p>Bothata: <math>43 - 12</math></p> <p>Kwala '<math>43 - 12 =</math>' mo patikwalelo.</p> <p>Polota '<math>43</math>' gaufi le pheletso ya mola (ka gonne go ntsha go raya gore re ya go tlolela kwa morago).</p>	<p style="text-align: center;"><math>43 - 12 =</math></p> 
<p>Morutabana: Re tshwanetse go tlolela morago ga 12. A re tlhatlhamolole 12 ka 10 le 2. Ke eng <math>43 - 10</math>?</p> <p>Barutwana: 33</p> <p>Dira metlolo e 10, go fitlha go 33.</p>	<p style="text-align: center;"><math>43 - 12 =</math></p> 
<p>Morutabana: Re santse re tshwanetse go tlolela morago ga 2. Ke eng 33 ntsha 2?</p> <p>Barutwana: 31</p> <p>Kwala mo molapalong jaaka e bontsha.</p> <p>Morutabana: Re tlositse 12 ka go ntsha 10 le go ntsha 2.</p> <ul style="list-style-type: none"> <li>• Re <b>polota</b> nomoro ya ntlha</li> <li>• Re <b>tlhatlhamolola</b> nomoro ya bobedi</li> <li>• Re <b>tlola</b> bo-lesome le bo-nngwe (metlolo ya go ya morago ka gonne re a ntsha)</li> <li>• Re neela <b>karabo</b></li> </ul> <p>Morutabana: Jaanong <math>43 - 12</math> e tswana le <math>43 - 10 - 2 = 31</math>.</p> <p>Kwala polelopalo jaaka e bontsha.</p>	<p style="text-align: center;"><math>43 - 12 = 31</math></p> 

## Tirwana ka nosi

Barutwana ba tshwanetse go leka sekao se se latelang ka tlhaloganyo:

$$62 - 12 \quad 53 - 11$$

Barutwana ba tswanetse go tlhalosa go nagana ga bone sk. "go  $62 - 12$ , Ke ntsha 10 go 62 go bona 52, Ke be ke ntsha 2, jaanong karabo ke 50."

Bolelela barutwana ba SE bale ka bo1.



## DITOGAMAANO TSA GO TLOLA: TSHIMOLOGO THUTO 6

## Go ithutafatso ga tlhaloganyo motsotso o le 1

## a. Tlhakanya 10 (kgotsa tlhakanya katiso ya 10)

Mokgwa o o tshwanang jaaka '10 go feta', fela ka nako e morutabana o neela tharabololo ya 'tlhakanya10'.

$$\begin{array}{lcl} \text{Morutabana: } 16 + 10 & \rightarrow & \text{Barutwana: } 26 \\ \text{Morutabana: } 84 + 10 & \rightarrow & \text{Barutwana: } 94 \\ \text{Morutabana: } 96 + 10 & \rightarrow & \text{Barutwana: } 106 \quad \text{jalojalo...} \end{array}$$

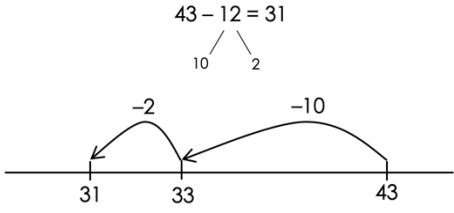
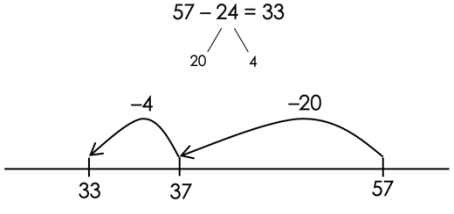
## b. Ntsha 10 (Kgotsa ntsha katiso ya 10)

Mokgwa o o tshwanang jaaka '10 go nnye', fela ka nako e morutabana o neela tharabololo ya 'ntsha 10'.

$$\begin{array}{lcl} \text{Morutabana: } 56 - 10 & \rightarrow & \text{Barutwana: } 46 \\ \text{Morutabana: } 84 - 10 & \rightarrow & \text{Barutwana: } 74 \\ \text{Morutabana: } 95 - 10 & \rightarrow & \text{Barutwana: } 85 \quad \text{jalojalo...} \end{array}$$

## Tatelano ya Tirwana

Mo thutong e, re dirisa ditogamaano tsa go tlola go rarabolola dipalelo tsa ntsha.

<p>Kopa barutwana ba leke go gopola go tswa maabane: Re rarabolotse jang <math>43 - 12</math>?</p> <p>Letlelela barutwana ba tlhalose mokgwa go yo a dutseng le ena, mme o kope para e le nngwe go e bontsha mo patikwalelo.</p> <p>Gopotsa barutwana dikgato tse ba di ithutileng mo thuto e e fetileng: <b>polota, tlhatlhamolola, tlola</b> (go ya morago) le <b>karabo</b>.</p>	<p>Setshwantsho sa bofelo se se feletseng se bontshitswe mo tlase:</p> $43 - 12 = 31$ 
<p>Bontsha mo patikwalelong go rarabolola: <math>57 - 24</math></p> <p>Polota '57' mo molapalong.</p> <p>Tlhatlhamolola 24 go 20 le 4.</p> <p>Tlolela morago ga 20 mme o tlolele morago ga 4.</p> <p>Barutwana bangwe batla dira metlolo e le mebedi go e la morago ka 10 go na le gore a tlolele morago ga nngwe ka 20. Se se siame.</p> <p>Kwala karabo.</p> <p>Morutabana: Jaanong <math>57 - 24</math> e tshwana le</p> $57 - 20 - 4 = 33.$ <p>Kwala polelopalo jaaka e bontshitswe.</p>	<p>Setshwantsho sa bofelo se se feletseng se bontshitswe mo tlase:</p> $57 - 24 = 33$ 

## Tirwana ka nosi

Barutwana ba tshwanetse go leka sekao se se latelang ka tlhaloganyo:

$$95 - 23 \quad 43 - 22$$

Barutwana ba tswanetse go tlhalosa go nagana ga bone, sk. “go 95 – 23, ke ntsha 20 go 95 go bona 75, ke ntsha 3, jaaonong karabo ke 72.”

Bolelela barutwana ba SE bale ka bo1.

Bana ba ba itemogelang mathata go dira se ka tlhaloganyo ba ka nna ba taka molapalo o o makgwakgwa go ba thusa.

**Tshegetso ya Vidio**

Ditogamaano tsa go tlola 6



<https://youtu.be/JQq2zL6pwCM>

**Tshegetso ya Vidio**

Ditogamaano tsa go tlola 7



<https://youtu.be/uFGzuToKGkA>

**DITOGAMAANO TSA GO TLOLA: TSHIMOLOGO THUTO 7****Go ithutafatsa ga tlhaloganyo motsotso o le 1**

Go tlolela go katiso ya lesome **pele**/ Go tlolela **pele** go katiso ya lesome

Se ga se go atametsa go lesome le le gaufi mme ke go tlolela **pele** go katiso ya lesome mo molapalong.

“Neela katiso ya lesome e e tlang **pele** ga...”

Morutabana: 26

→

Barutwana: 20

Morutabana: 53

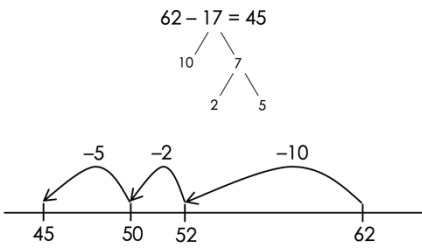
→

Barutwana: 50

jalojalo...

**Tatelano ya Tirwana**

Mo thutong e, re atolosa ditogamaano tsa go tlola go tsenya kgato ya go kgabaganyetsa go lesome

<p>Bontsha mo patikwalelo gore o dira jang go kgabaganyetsa go lesome go rarabolola: <math>62 - 17</math></p> <p>Polota '62' mo molapalong o o se nang sepe.</p> <p>Tlhatlhamolola 17 go 10 le 7.</p> <p>Tlolela morago ka 10 go fitlha go 52.</p> <p>Tlolela morago ka 7 e e setseng ka go kgabaganyetsa go katiso 10 pele (se ke 50).</p> <p>Jaanong 7 e tlhoka go tlhatlhamololwa ka 2 le 5.</p> <p>Tlolela morago ka 2 le 5.</p> <p>Kwala karabo.</p>	<p>Setshwantsho sa bofelo se se feletseng se bontshitswe mo tlase:</p>  <p style="text-align: center;"><math>62 - 17 = 45</math></p> <p style="text-align: center;">10      7</p> <p style="text-align: center;">2      5</p> <p style="text-align: center;">-5      -2      -10</p> <p style="text-align: center;">45      50      52      62</p>
<p>Morutabana: Jaanong <math>62 - 17</math> e tshwana le:</p> <p><math>62 - 10 - 7 = 45</math> kgotsa <math>62 - 10 - 2 - 5 = 45</math></p>	<p><math>62 - 10 - 7 = 45</math></p> <p><math>62 - 10 - 2 - 5 = 45</math></p>

**Tirwana ka nosi**

Barutwana ba tshwanetse go leka sekao se se latelang ka tlhaloganyo:

$$75 - 18 \quad 93 - 14$$

Barutwana ba tswanetse go tlhalosa go nagana ga bone sk. “go  $75 - 18$ , Ke ntsha 10 go 75 go bona 65, ke be ke ntsha 5 go bona 60, ke be ke ntsha 3, jaanong karabo ke 57”.

Bolelela barutwana ba SE bale ka bo1.

Neela barutwana ba ba fetsang ka bonako ikatiso tse dintsi:

$$73 - 28 \quad 62 - 35$$

**Tirwana ya gae: Tiro 2**

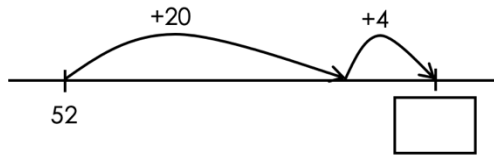
Kwa pheletsong ya thulaganyo ya gompieno neela barutwana tiro 2.

O seka wa lebelela nako fa ba dira tiro e. Maikaelelo ke go fa barutwana tiro ya go ikatisa ka go kwala se ba se dirileng ka tlhaloganyo.

Leina:

## Ditogamaano tsa go tlola: Pampiri ya tiro 2

1.



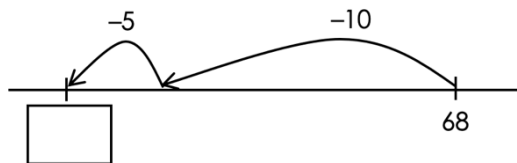
2.

$$45 + 8 = \square$$

3.

$$64 - 25 = \square$$

4.



5.

$$18 + \square = 42$$

6.

$$73 - \square = 58$$

7.

$$53 - 24 = 53 - \square - 4$$

8.



$$27 + \square + 6 = 63$$

9.



$$72 - \square - 3 = 49$$

10.

$$86 - \square = 86 - 20 - 9$$

### **Kelotlhoko go morutabana**

Mo o ka kwala dintlha ka ga thutiso le ka se barutwana ba santseng ba tlhoka thuso ka sona ka ditogamaano tse di farologaneng. O ka kwala dintlha tse dingwe tse o batlang go di rarabolola mo tshimologong ya thuto e e latelang.

**Tshegetso ya Vidio**

Ditogamaano tsa go tlola 8



<https://youtu.be/BHC9jDIUdRI>



**DITOGAMAANO TSA GO TLOLA: TSHIMOLOGO THUTO 8****Go ithutafatso ga tlhologanyo ya motsotso o le 1**

- a. Go tlolela go katiso ya lesome **pele**  
 b. Ntsha katiso ya 10

**Tirwana tatelano**

Mo thuthong e, re dirisa ditogamaano tsa go tlola go rarabolola palo e e tlogetsweng.

$$\text{Bothata: } 84 - \square = 61$$

Poloto '84' mo molapalong.

Morutabana: Re tlhoka go tlolela morago go 61.

Tshwaya '61' mo molapalong.

Morutabana: Re tshwanetse go dira metlolo e mekae ya masome le metso?

Barutwana: Ntsha 20 go bona 64 le go ntsha 3 go bona 61

Thala metlolo e mo molapalong.

Botsa: Re tloletse morago ga kae gotlhelele?

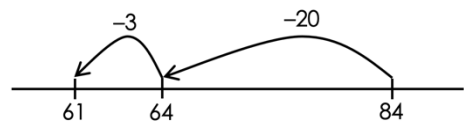
Barutwana: 23

Kwala karabo mo bolokong.

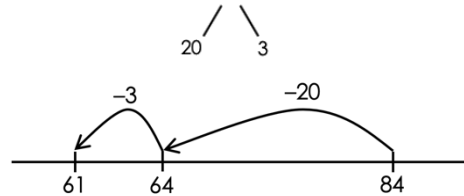
Morutabana: Jaanong  $84 - 20 - 3$  e tshwana le  $84 - 23 = 61$

Kwala polelopalo jaaka e bontshitswe.

$$84 - \square = 61$$



$$84 - \boxed{23} = 61$$

**Tirwana ka nosi**

Barutwana ba tshwanetse go leka sekao se se latelang ka tlhologanyo:

$$75 - \square = 62 \quad 93 - \square = 69$$

Barutwana ba tshwanetse go tlhalosa go nagana ga bone sk. "go  $75 - \square = 62$ , Ke ntsha 10 go bona 65, ke be ke ntsha 3 go bona 62, jaanong go tlola gotlhelele ke 13."

Bolelela barutwana ba SE bale ka bo1.

Neela barutwana ba ba fetsang ka bonako ikatiso e ntsi:

$$75 - \square = 63 \quad 94 - \square = 69$$

Leina:

Ditogamaano tsa go tlola: Thatlhobo ya bofelo

KAROLO I

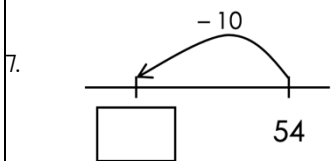
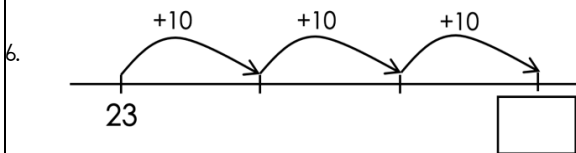
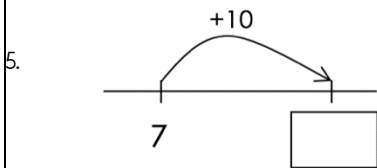
Metsotos e le 2

1. Tsenya palo e e tlogetsweng.  
12, 22, 32, 42,

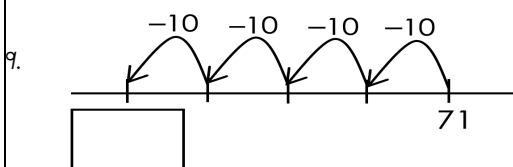
2. Tsenya palo e e tlogetsweng.  
79, 69, 59, 49,

3.  $6 + 30 =$

4.  $57 - 10 =$

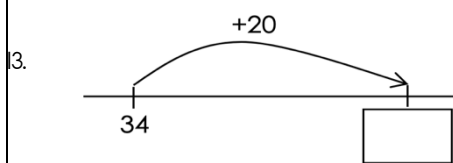
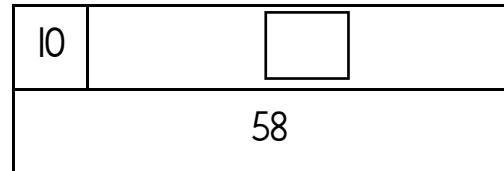
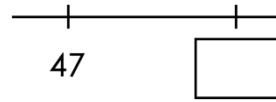


8.  $37 +$    $= 40$



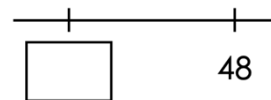
10.  $31 - 20 =$

1. Katiso ya 10 e e latelang ke eng?



4.  $16 + 30 =$

5. Katiso ya 10 e e tlang pele ga 48 ke eng?



6.  $79 - 40 =$

7.  $38 -$    $= 18$

8.   $- 20 = 64$

9.  $37 +$    $= 77$

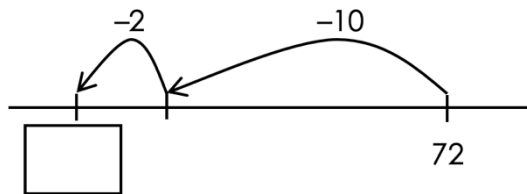
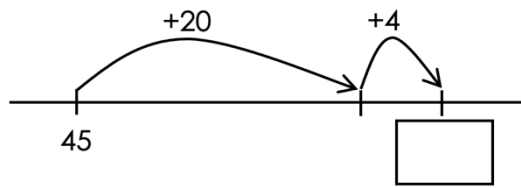
20.   $+ 20 = 66$

Maduo otlhe go tswa go 20

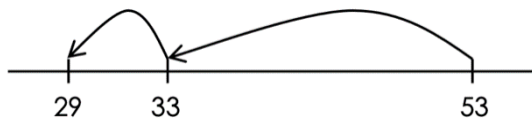
## Ditogamaano tsa go tlola: Tlhatlhobo ya bofelo

Karolo 2

Metsotso e le 3



$$45 + \boxed{\phantom{00}} + 7 = 82$$



$$53 - \boxed{\phantom{00}} - 4 = 29$$

5.

$$57 + 26 = \boxed{\phantom{00}}$$

6.

$$83 - 24 = \boxed{\phantom{00}}$$

7.

$$19 + \boxed{\phantom{00}} = 41$$

8.

$$52 - \boxed{\phantom{00}} = 37$$

9.

$$61 - 32 = 61 - \boxed{\phantom{00}} - 2$$

10.

$$74 - \boxed{\phantom{00}} = 74 - 20 - 5$$

Maduo otlhe go tswa go 10

## **KOKETSOPEDI LE GO KGAOGANYA MAGARENG**

### **Matseno**

Tsepamo mo tshimologong ya thuto di le tharo tsa ntlha ke go gopola dikoketsopedi go fitlha ka koketsopedi ya 10 le go kgaoganya magareng palo maleka go fitlha go 20. Re gokaganya kgopolo le puo le patlo ya setshwantsho sa koketsopedi/go kgaoganya magareng. Mo thutong di le tlhano tse di latelang, maitlhome ke go dirisa dintlha tsa nnete tsa kgopolo go dira ka tlhaloganyo go diragala go koketsopedi le go kgaoganya magareng ka dipalo tse dikgolo. Dingwe tsa ditirwana di etelwa pele ke morutabana mo patikwalelo mme tse dingwe ke tsa barutwana go di dira k abo bone.

### **Bokgoni ba go gopola ka bonako**

Go na le bokgoni ba go gopola ka bonako ba dilo di le tharo tse bana ba di tlhokang go ithuta koketsopedi le go kgaoganya magareng:

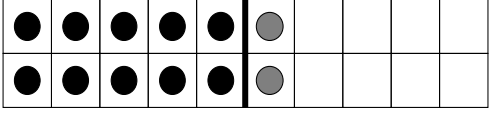
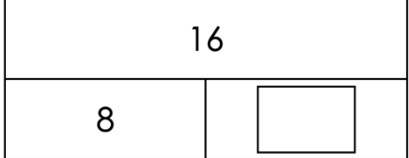
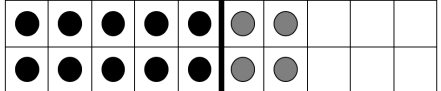
- Dikoketsopedi go fitlha go koketsopedi ya 10 (sk. koketsopedi ya 4 ke 8 kgotsa koketsopedi ya 7 ke 14);
- Go kgaoganya magareng ga dipalo maleka go fitlha go 20 (sk. halofo ya 6 ke 3 kgotsa halofo ya 18 ke 9);
- Dikoketsopedi le dihalofo tsa dipalo tsa 'botsalano' (sk. koketsopedi ya 30 ke 60 kgotsa halofo ya 50 ke 25 kgotsa koketsopedi ya 200 ke 400).

Leina:

**Koketsopedi le hafola magareng: Tlhatlhobo-pele**

Karolo I

Metsotso e le 2

<p>1. </p> <p><math>6 + 6 = \square</math></p>	<p>1. <math>15 + 15 = \square</math></p>
<p>2. halof o ya 12 = <math>\square</math></p>	<p>2. <math>7 \times 2 = \square</math></p>
<p>3. <math>9 + 9 = \square</math></p>	<p>3. halof o ya <math>\square = 7</math></p>
<p>4. koketsopedi ya 8 = <math>\square</math></p>	<p>4. koketsopedi ya 100 = <math>\square</math></p>
<p>5. <math>\square \times 2 = 12</math></p>	<p>5. koketsopedi 20 = <math>\square</math></p>
<p>6. </p>	<p>6. halof o ya <math>\square = 40</math></p>
<p>7. koketsopedi ya 10 = <math>\square</math></p>	<p>7. halof o ya 50 = <math>\square</math></p>
<p>8. </p> <p>halof o ya <math>1/4 = \square</math></p>	<p>8. <math>16 \div 2 = \square</math></p>
<p>9. <math>10 \div 2 = \square</math></p>	<p>9. halof o ya 30 = <math>\square</math></p>
<p>10. halof o ya 18 = <math>\square</math></p>	<p>20. <math>2 \times 60 = \square</math></p>
<p>Maduo otlhe go tswa go 20</p>	

Koketsopedi le go kgaoganya magareng: Tlhatlhobo-pele

KAROLO 2

Metsotso e le 3

1. Koketsopedi ya 42 =

2.  $36 \times 2 =$

3.  $64 \div 2 =$

4. halof o ya 102 =

5. koketsopedi ya 47 =

6. halof o ya 38 =

7. halof o ya  = 52

koketsopedi ya 39 ke 78

8. halof o ya 78 ke

9.  $39 + 38 =$

10. koketsopedi ya 39 = 40 + 40 -

Maduo otlhe go tswa go 10

## KOKETSOPEDI LE GO KGAOGANYA MAGARENG: TSHIMOLOGO THUTO 1

### Go ithutafatsa ga tlhaloganyo motsotso e le 1

'Ke a bontsha, wena o a bua' (Tirwana ya phaposi yotlhe le ya barutwana ba parilwe)

a. Morutabana o bontsha palo ya 'koketsopedi' a dirisa menwana ya diatla tse pedi, sk.



Koketsopedi ya 3 ke 6. 'Jaanong mpoletse polelopalo ya koketsopedi ya menwana e ke e bontshang'.

Morutabana o bontsha: Koketsopedi 4 Koketsopedi 1 Koketsopedi 3 Koketsopedi 5 Koketsopedi 2

Barutwana ba bua polelopalo e e maleba, sk. "koketsopedi ya 4 ke 8".

b. Barutwana ba ba dirang ka dipara ba kana ba atolosa tirwana ka go bontsha koketsopedi ya 6 – koketsopedi ya 10 ba dirisa menwana ya bone:

Morutabana: Para nngwe le nngwe, mpontsha koketsopedi ya 6.



Dipara tsa barutwana:

Morutabana: Go menwana e le kae gotlhelele go Koketsopedi 6?

Kopa barutwana go lebelela ka go kopanya diatla tsa bone tse di tletseng le diatla ka monwana o le mongwe o o bulegileng. Thusa barutwana go bona gore karabo 12 e dirilwe ka diatla di le pedi ka menwana e le 5 le diatla di le pedi ka monwana o le 1: 5 + 5 le 1 + 1.

### Tatelano ya tirwana

Mo thutong e, re ya go dirisa dintlha tsa ga 20 tse di botlhokwa tsa koketsopedi le go kgaoganya magareng ka go lekana.

Bothata: Koketsopedi 6

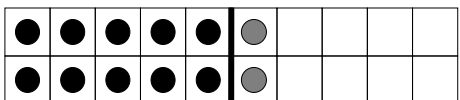
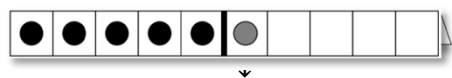
Bontsha didoto di le thataro go halofo e le nngwe ya karata ya dikoketsopedi. Bula karata.

Morutabana: Jaanong ke na le koketsopedi thataro. Ke na le didoto di le kae gotlhelele?

Barutwana: 12

Morutabana: O itse jang gore koketsopedi 6 ke 12?

Reetsa barutwana ba ba reng dikarata tsa dikoketsopedi di bontsha: '6 le 6', 'ditlhophadi le pedi tsa 6', 'pedi atisa ka 6', '6 x 2'.



Koketsopedi ya 6 = 12

Ditlhophadi le pedi tsa thataro ke 12

Pedi atisa ka 6 ke 12

$$6 \times 2 = 12$$



Bothata: halofo ya 12

Bontsha didoto di le lesomepedi mo karateng ya dikoketsopedi. Mena karata mo bogareng ka go lekana go ya ka tsela/mokgwa wa bolelee.

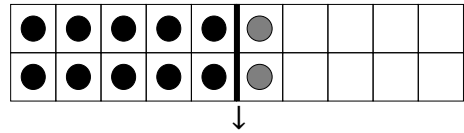
Morutabana: jaanong ke kgona go bona halofo ya didoto di le 12 le wena o kgona go bona halofo. ka jalo halofo ya 12 ke eng?

Barutwana: 6

Morutabana: O itse jang gore karabo ke 6?

Reetsa go barutwana ba ba neelang tlhaloso jaana: 'halofo ya 12 ke 6' kgotsa fa 'lesomepedi arolwa ka dikarolo di le pedi ke 6' kgotsa 'lesomepedi le kgaogantswe ka go lekana gabedi ke thataro' kgotsa ' $12 \div 2 = 6$ '. Fa go se na se se neetsweng se se tshwanang le se, dira barutwana ba boeletse dipolelo tse fa morago ga gago.

Kwala mefuta e e farologaneng mo patikwalelo.



Halofo ya 12 ke 6

Lesomepedi fa le arogangwa ka dikarolo di le pedi ke 6

Fa lesomepedi le kgaogantswe magareng ga 2 ke 6.

$$12 \div 2 = 6$$

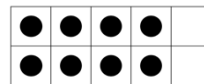
(Dikai tse ditshwanetse go nna mo patikwalelo.)

Boeletsa ka dikarata tsa didoto tsa koketsopedi ya 4 le koketsopedi ya 9.

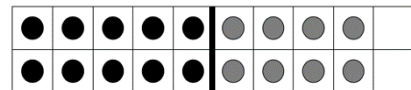
Dikarata tsa didoto tsa halofo ya 8 le halofo ya 20

Kopa barutwana go bua dipolelo tse di farologaneng go nyalanya le karata nngwe le nngwe ya didoto tsa koketsopedi le halofo.

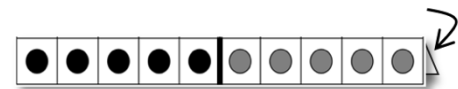
Rotloetsa barutwana go bona didoto di le tlhano tse (dintsho) mo dikarateng tsa didoto le go di dirisa go bona dinomoro tsa didoto ka bonako. Ka jalo go koketsopedi 9 re bona bo5 gabedi jaaka 10 le bo4 gabedi jaaka 8, ka jalo koketsopedi ke 18.



Koketsopedi 4 le halofo ya 8



Koketsopedi 9



Halofo ya 20

### Tirwana ka nosi

Jaanong barutwana ba tshwanetse go leka pampiri ya tirwana ka nosi e e neetsweng ya tshimololo thuto 1. Barutwana ba tshwanetse go feleletsa dipolelo, le go kwala dipolelo, mo tlase ga setshwantsho sa dikarata tsa didoto mo pampiring ya tiro.

### Tshegetso ya Vidio

Koketsopedi le go kgaoganya magareng 1



<https://youtu.be/UMmzMVM-SS0>

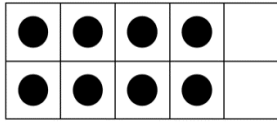


Leina:

**Koketsopedi le go kgaoganya magareng: Tshimololo thuto I: Tirwana ka nosi**

Feleletsa polelo kgotsa kwala dipolelo ka setshwantsho sengwe le sengwe.

1. Koketsopedi ya 4



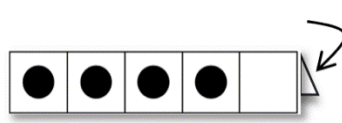
Koketsopedi ya  ke

Ditlhopha di le pedi tsa  ke

Pedi atisa  ke

x 2 =

2. Halof'o ya 8



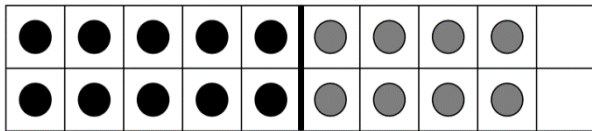
Halof'o ya  ke

8 arola ka 2 ke

8 kgaoganya magareng 2 ke

÷ 2 =

3. Koketsopedi ya 9




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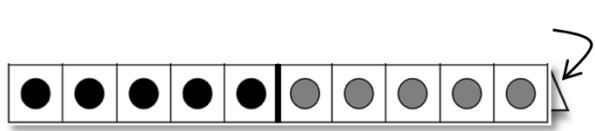


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4. Halof'o ya 20




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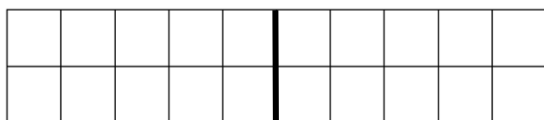
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5. Koketsopedi ya

Thala didoto tsa palo ya gago:




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6. Halof'o ya

Thala didoto tsa palo ya gago:




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## KOKETSOPEDI LE GO KGAOGANYA MAGARENG: TSHIMOLOGO THUTO 2

### Go ithutafatso ga tlhaloganyo motsotso o le 1

Pop-Fizz koketsopedi le go kgaoganya magareng ka lesome

- a. Morutabana a re 'pop', Barutwana ba re 'fizz'; morutabana o bua nomoro/palo, barutwana ba araba ka **koketsopedi** (kgotsa katiso ya 10 go feta):

Morutabana: pop	→	Barutwana: fizz	
Morutabana: 1	→	Barutwana: 2	
Morutabana: pop	→	Barutwana: fizz	
Morutabana: 5	→	Barutwana: 10	jalojalo...

Koketsopedi go fitlha go 10: 1 – 2; 3 – 6; 5 – 10; 4 – 8; 2 – 4.

- b. Morutabana a re 'pop', Barutwana ba re 'fizz'; morutabana o bua nomoro/palo, barutwana ba araba ka go **kgaoganya magareng** (kgotsa katiso ya 10 go nnye):

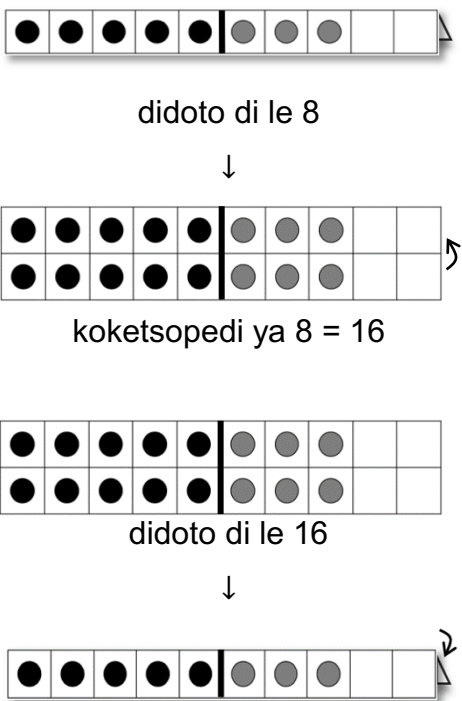
Morutabana: pop	→	Barutwana: fizz	
Morutabana: 8	→	Barutwana: 4	
Morutabana: pop	→	Barutwana: fizz	
Morutabana: 6	→	Barutwana: 3	jalojalo ...

Hafola go fitlha go 10: 10 – 5; 6 – 3; 4 – 2; 8 – 4; 2 – 1

### Tatelano ya Tirwana

Mo thutong e re ikatisa ka dintlha tse di bothokwa tsa koketsopedi le go hafola go fitlha go 20.

*Elatlhoko: Dikarata tsa didoto tsa koketsopedi di teng mo bukeng ya **Print Master**.*

<p>Bothata: Golaganya koketsopedi ya 8 = <input type="checkbox"/>;</p> <p style="text-align: center;">halofo ya 16 = <input type="checkbox"/></p> <p>Dirisa dikarata tsa didoto tsa koketsopedi 8. Mena karata go bontsha setlhophha se le sengwe sa 8. Bula go bontsha ditlhophha tsa 8 ka bobedi.</p> <p>Morutabana: Ka jalo koketsopedi 8 ke eng?</p> <p>Barutwana: 16</p> <p>Kwala 'koketsopedi 8 = 16' mo patikwalelo</p> <p>Morutabana: Ka jalo halofo ya 16 ke eng? (Mena karata o bua go bontsha gore o dira jang halofo ka go dira ditlhophha di le pedi tse di lekanang.)</p> <p>Barutwana: 8</p> <p>Kwala 'halofo ya 16 = 8' mo tlase ga polelo ya koketsopedi mo patikwalelo.</p> <p>Dikai tse tsotlhe di tshwanetse go nna/sala mo patikwalelo.</p>	 <p style="text-align: center;">didoto di le 8</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">koketsopedi ya 8 = 16</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">didoto di le 16</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">halofo ya 16 = 8</p>
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### **Tiro ka nosi**

Baya dikarata tsa didoto tsa koketsopedi 5, koketsopedi 7 le koketsopedi 9 mo patikwalelo. Barutwana ba tshwanetse go kwala dipolelo palo tsa koketsopedi le tsa go kgaoganya magareng.

Barutwana ba tshwanetse go rotloediwa go tlhalosa go dikakanyo tsa bone.

Bolelela barutwana ba seka ba bala ka bo-1.

Fa bangwe ba barutwana ba fetsa tirwana tse ka bonako, ba kope go kwala dipolelopalo tsa didoto tsa dikarata tse dingwe.

### **Tshegetso ya Vidio**

Koketsopedi le go kgaoganya magareng 2



<https://youtu.be/8g1unCfK1Lo>

**Tshegetso ya Vidio**

Koketsopedi le go kgaoganya magareng 3



[https://youtu.be/L2\\_MyczJOyU](https://youtu.be/L2_MyczJOyU)

### KOKETSOPEDI LE GO KGAOGANYA MAGARENG: TSHIMOLOGO THUTO 3

#### Go ithutafatso ga tlhaloganyo motsotso o le 1

Pop-Fizz dikoketsopedi le go hafola magareng go fitlha go masomepedi

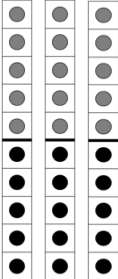
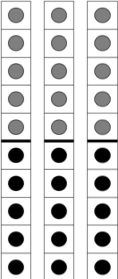


Dikoketsopedi go fitlha go 20: 1 – 2; 3 – 6; 5 – 10; 4 – 8; 2 – 4; 6 – 12; 9 – 18; 7 – 14; 8 – 16; 10 – 20.

Haloho go fitlha go 20: 10 – 5; 6 – 3; 4 – 2; 8 – 4; 2 – 1; 12 – 6; 18 – 9; 14 – 7; 16 – 8; 20 – 10.

#### Tatelano ya Tirwana

Mo thutong e, re ya go ikatisa ka dikoketsopedi tsa katiso ya lesome.

*Elatlhoko: Di seterepe tsa didoto di teng mo bukeng ya Print Master.*

<p>Bothata: Golaganya koketsopedi ya 3 = <input type="text"/> ; koketsopedi ya 30 = <input type="text"/></p> <p>Dirisa diterepe tsa didoto tsa 10 di le thataro le go di rulaganya go bontsha koketsopedi ya 30. Morutabana: Re a itse gore koketsopedi ya 3 = 6, ka jalo koketsopedi ya 30 ke eng?</p> <p>Barutwana: 60 Morutabana: koketsopedi ya 30 ke 60, ka jalo haloho ya 60 ke eng? Barutwana: 30</p> <p>Kwala polelopalo jaaka e bontsha mme o kaye gore 6 le 60 di a golaganya fela jaaka 3 le 30. Bolelela barutwana gore ba gopole gore koketsopedi le go kgaoganya magareng di a golaganya. Morutabana: Re ka dirisa diterepe go emela 10 go na le go bontsha didoto di le lesome ka dinako tsothe. Bontsha barutwana mo patikwalelo gore lesome le ka bontshiwa jang o dirisa diterepe tse ditelele tse o ka di thalang mo patikwalelong.</p>	<p style="text-align: center;">Koketsopedi ya 3 = 6</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p style="text-align: center;">Koketsopedi ya 30 = 60</p> <p style="text-align: center;">Haloho ya 60 = 30</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div>
--	--

#### Tirwana ka nosi

Jaanong barutwana ba ka leka dikai tse di latelang ka *tlhaloganyo*:

- |                   |                   |                   |
|-------------------|-------------------|-------------------|
| Koketsopedi ya 2  | Koketsopedi ya 5  | Koketsopedi ya 7  |
| Koketsopedi ya 20 | Koketsopedi ya 50 | Koketsopedi ya 70 |

Bolelela barutwana ba seka ba bala ka bo-1. Ba dirise kgolagano e ba fetsang go ithuta go kwala ka bonako dipalo tse dikgolo tsa dikoketsopedi.

Fa bangwe ba barutwana ba fetsa tirwana tse ka bonako, ba neye katiso di le dintsi:

- |                   |                   |              |              |
|-------------------|-------------------|--------------|--------------|
| Koketsopedi ya 3  | Koketsopedi ya 8  | Haloho ya 4  | Haloho ya 8  |
| Koketsopedi ya 30 | Koketsopedi ya 80 | Haloho ya 40 | Haloho ya 80 |

**KOKETSOPEDI LE GO KGAOGANYA MAGARENG: TSHIMOLOGO THUTO 4**

**Go ithutafatso ga tlhaloganyo motsotso o le 1**

Koketsopedi le go kgaoganya magareng ga dipalo tsa botsalano.

Dipalo tsa botsalano ke dipalo tse di bonolo go dirisiwa. Gantsi tse ke dikatiso tsa lesome.

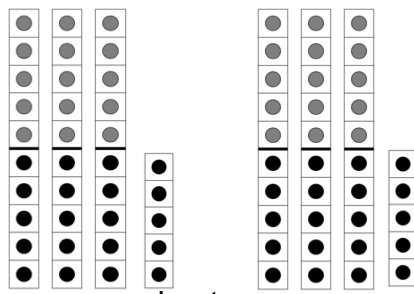
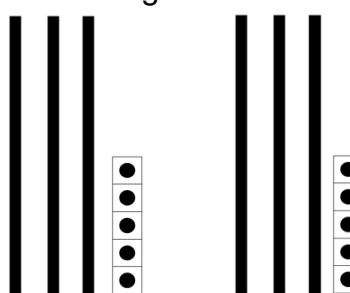
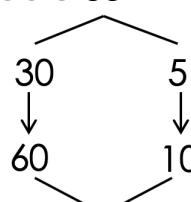
“Ke eng...?”

- |                               |   |                |             |
|-------------------------------|---|----------------|-------------|
| Morutabana: koketsopedi ya 30 | → | Barutwana: 60  |             |
| Morutabana: koketsopedi ya 10 | → | Barutwana: 20  |             |
| Morutabana: koketsopedi ya 50 | → | Barutwana: 100 |             |
| Morutabana: halofo ya 40      | → | Barutwana: 20  |             |
| Morutabana: halofo ya 50      | → | Barutwana: 25  |             |
| Morutabana: halofo ya 100     | → | Barutwana: 50  | jalojalo... |

**Tatelano ya Tirwana**

Mo thutong e re ikatisa ka koketsopedi ya didijiti di le pedi.

*Elatlhoko: Diseterepe tsa didoto di teng mo Print Master book.*

<p><b>Bothata: Koketsopedi 35</b></p> <p>Dirisa diterepe tsa didoto tse 10 di le thataro, le diterepe tse 5 di le pedi, le go di rulaganya go bontsha 35.</p> <p>Morutabana: Polelopalo ya koketsopedi e bontsha taekerama efe?</p> <p>Gopotsa barutwana gore seterepe se le 1 (didoto kgotsa mola o o tiileng) o bontsha lesome le le 1.</p> <p>Barutwana: Koketsopedi ya 35 (kgotsa 35 + 35)</p> <p>Morutabana: Re ka dira jang go fitlhelela karabo?</p> <p>Reetsa go barutwana ba ba reng ba baya masome mmogo go bona masome a le 6 kgotsa 60 le go baya bo-5 ba le babedi mmogo go go neela 10.</p> <p>Kwala mokgwa wa go ‘tlhatlhamolola’ jaaka go bontshiwa mo patikwalelo e e bapileng.</p>	<p style="text-align: center;"><b>Koketsopedi ya 35</b></p>  <p style="text-align: center;">kgotsa</p>  <div style="text-align: center; margin-top: 20px;"> <p>double 35</p>  <p>double 35 = 70</p> </div>
--	---

<p>Bothata: <math>29 \times 2</math></p> <p>Boeletsa mokgwa wa go tthatlhamolola koketsopedi ya 29 jaaka e bontshitswe. Gopotsa barutwana gore go atisa ka 2 (kgotsa <math>\times 2</math>) e tshwana le koketsopedi.</p> <p>Letlelela barutwana go go thusa go tlatsa koketsopedi ya masome le metso.</p> <p>Bangwe ba barutwana ba kana ba re <math>29 \times 2</math> ke <math>60 - 2 = 58</math>. Tsela e le yone e ka amogelwa.</p>	<div style="text-align: center;"> <p>double 29</p> <p>double 29 = 58</p> </div>
--	---

### Tirwana ka nosi

Jaanong, barutwana ba ka leka dikai tse di latelang:

Koketsopedi ya 41      Koketsopedi ya 36      Koketsopedi ya 47

Barutwana ba tshwanetse go kwala ka mokgwa wa go tthatlhamolola le go dira koketsopedi ya masome le metso ka tthaloganyo. Leano ke go dira gore ba kgone go araba dipotso tse ka tlhogo/tthaloganyo.

Barutwana ba tshwanetse go tthalosa kakanyo ya bone, sk. “koketsopedi ya 47 ke koketsopedi ya 40 (ke 80) le koketsopedi ya 7 (ke 14). 80 le 14 ke 80, 90, 94.”

Bolelela barutwana ba seka ba bala ka bo-1.

### Tirwana ya gae– Pampiri ya tiro 1

Kwa pheletsong ya thulaganyo ya gompiono neela barutwana pampiri ya tiro 1.

O seka wa lebelela nako fa ba dira tiro e. Maikaelelo ke go fa barutwana tiro ya go ikatisa ka go kwala se ba se dirileng ka tthaloganyo.

### Tshegetso ya Vidio

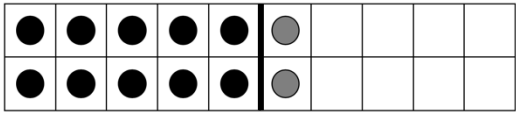
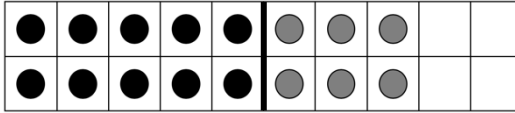
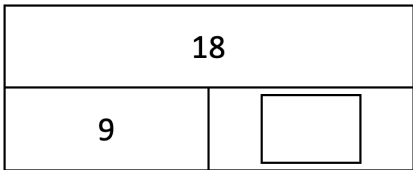
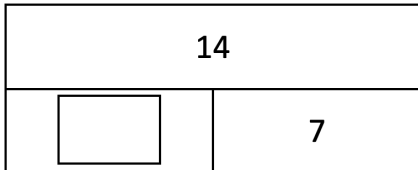
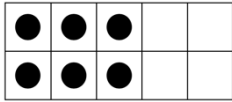
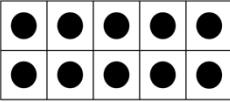
Koketsopedi le go kgaoganya magareng 4



<https://youtu.be/qnSniN-bliU>

Leina:

Koketsopedi le go kgaoganya magareng: Pampiri ya tiro I

<p>1. </p> <p><math>6 + 6 = \square</math></p>	<p>11. </p> <p><math>8 + 8 = \square</math></p>
<p>2. Halof o ya 12 = <input type="text"/></p>	<p>12. <math>11 \times 2 = \square</math></p>
<p>3. <math>9 + 9 = \square</math></p>	<p>13. Halof o ya <input type="text"/> = 8</p>
<p>4. Koketsopedi ya 7 = <input type="text"/></p>	<p>14. Koketsopedi ya 30 = <input type="text"/></p>
<p>5. <input type="text"/> <math>\times 2 = 16</math></p>	<p>15. Koketsopedi ya 50 = <input type="text"/></p>
<p>6. </p>	<p>16. </p>
<p>7. Koketsopedi ya 10 = <input type="text"/></p>	<p>17. Halof o ya 40 = <input type="text"/></p>
<p>8. </p> <p>Halof o ya 6 = <input type="text"/></p>	<p>18. </p> <p>Halof o ya 10 = <input type="text"/></p>
<p>9. <math>12 \div 2 = \square</math></p>	<p>19. Halof o ya 70 = <input type="text"/></p>
<p>10. Halof o ya <math>14 = \square</math></p>	<p>20. <math>2 \times 70 = \square</math></p>



**Kelotlhoko go morutabana**

Mo o ka kwala dintlha ka ga thutiso le se barutwana ba tlhokang thuso ka togamaano ya go kgabaganyetsa go lesome, O ka kwala dintlha tse dingwe tsa dilo tse o batlang go di rarabolola mo tshimologong ya thuto e e latelang.

**Tshegetso ya Vidio**

Koketsopedi le go kgaoganya magareng 5



<https://youtu.be/t2jBnZHnn1Y>

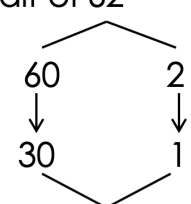
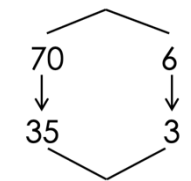
**KOKETSOPEDI LE GO KGAOGANYA MAGARENG: TSHIMOLOGO THUTO 5**

**Go ithutafatsa ga tlhaloganyo motsotso o le 1**

Koketsopedi le go kgaoganya magareng ga dipalo tsa botsalano.

**Tatelano ya tirwana**

Mo thutong e re ikatisa ka go hafola dipalo tsa didijiti di le pedi

<p>Bothata: <math>62 \div 2</math></p> <p>Gopotsa barutwana gore go arola ka 2 (<math>\div 2</math>) go tshwana le go dira halofo.</p> <p>Morutabana: Re ka dira jang go kaya gore halofo ya 62 ke eng?</p> <p>Reetsa barutwana ba ba buang ka go hafola 60 go bona 30 le hafola 2 go bona 1, go bona karabo ya 31.</p> <p>Kwala se ka mokgwa wa go 'tthatlhamolola' jaaka e bontshiwa mo patikwalelong.</p>	<p>half of 62</p>  <p>half of 62 = 31</p>
<p>Bothata: <math>76 \div 2</math></p> <p>Boeletsa mokgwa wa go tthatlhamolola go halofo ya 76 jaaka e bontshitswe. Gopotsa barutwana gore go aroganya ka 2 (kgotsa <math>\div 2</math>) e tshwana le go hafola.</p> <p>Letlelela barutwana go go thusa go tlatsa dihalofo tsa masome le tsa metso.</p>	<p>half of 76</p>  <p>half of 76 = 38</p>

**Tirwana ka nosi**

Jaanong, barutwana ba ka leka go dira dikai tse di latelang:

halofo ya 42                   $68 \div 2$                    $34 \div 2$

Barutwana ba tshwanetse go kwala go tthatlhamolola le go dira halofo ya bo-lesome le bo-nngwe ka tlhaloganyo.

Barutwana ba tshwanetse go tlhalosa kakanyo ya bone, sk. “ $34 \div 2$  ke halofo ya 30 (ke 15) le halofo ya 4 (ke 2). 15 le 2 ke 17.”

Bolelela barutwana ba SE bale ka bo-1.

**Tshegetso ya Vidio**

Koketsopedi le go kgaoganya magareng 6



<https://youtu.be/fxDY11LICsc>

## KOKETSOPEDI LE GO KGAOGANYA MAGARENG: TSHIMOLOGO THUTO 6

### Go lthuthafatsa ga tlhaloganyo motsotso o le 1.

E bue ka mokgwa o mongwe:

Dira ka mekgwa e e farologaneng ya koketsopedi le go kgaoganya magareng. Se se ka tsenyeletsa mafoko jaaka 'koketsopedi ya 7' le 'halofo ya 16', kgotsa mekgwa mengwe jaaka 'ditlhophha tsa 7 di le pedi' kgotsa '7 le 7' kgotsa '7 + 7' kgotsa '16 ÷ 2' kgotsa 'lesomethataro le kgaogantswe magareng'.

Se se ka tsenyeletsa setshwantsho se se jaaka se se ka fa tlase:

9	9
18	

Barutwana ba ka neela mokgwa wa go bua kgotsa go kwala 'koketsopedi 9 = 18' sk.  $9 + 9 = 18$      $18 - 9 = 9$     bo-robongwe ba le pedi ba dira  $18 \div 2 = 9$      $9 \times 2 = 18$

### Tatelano ya tirwana

Mo thutong e, re dirisa mekgwa e e farologaneng ya koketsopedi le go kgaoganya magareng.

<p>Bothata: koketsopedi 26</p> <p>Kopa barutwana go neela mekgwa e e farologaneng ka se ba se bonang mo taekeramong.</p> <p>Sekai, koketsopedi 26 e tshwana le <math>26 \times 2</math> kgotsa 'ditlhophha tsa 26 di le pedi'. Sekai se sengwe ke gore koketsopedi 26 ke 2 go feta koketsopedi 25 ka gonne setlhophha sengwe le sengwe se na le 1 go feta mo go tsona.</p> <p>Tsenya megopolo mengwe le mengwe e e mešwa go tswa go barutwana mo taekeramong.</p> <p>Bana bangwe ba ka neela palelo ya go ntsha <math>52 - 26 = 26</math>. Kwala se mo taekeramong fa e neetswe. Go gokaganya tlhakanya le ntsha go rutiwa jaaka togamaano kwa bokhutlong jwa tshimologo ya thuto tse.</p>	
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### Tirwana ka nosi

Jaanong barutwana ba ka thala bubi jwa dintlha tsa nnete jaaka fa godimo, go gokaganya go: Koketsopedi ya  $43 = 86$

Barutwana ba tshwanetse go tlhaloso dikakanyo tsa bone, sk. "Ke a itse gore 43 le 43 ke 86" kgotsa "koketsopedi ya 43 ke 86, ka jalo, Ke a itse koketsopedi 430 ke 860."

Fa barutwana bangwe le bangwe ba fetsa tirwana ka bonako, ba kope go bopa bubi jo bongwe jo bo amanyang dintlha ga nnete ba simolola ka nngwe ya dintlha tsa nnete tsa koketsopedi kgotsa gokgaoganya magareng tse ba di tlhopileng.

**KOKETSOPEDI LE KGAOGANYA MAGARENG: TSHIMOLOGO THUTO 7**

**Go ithutafatsa ga tlhaloganyo motsotso o le 1.**

Koketsopedi le go hafola magareng ga 10, 100, 1000

“Ke eng...?”

- Morutabana: koketsopedi ya 10 → Barutwana: 20
- Morutabana: koketsopedi ya 100 → Barutwana: 200
- Morutabana: koketsopedi ya 1000 → Barutwana: 2000
- Morutabana: halofo ya 40 → Barutwana: 20
- Morutabana: halofo ya 400 → Barutwana: 200
- Morutabana: halofo ya 4000 → Barutwana: 2000 jalojalo...

**Tatelano ya tirwana**

Mo thutong e barutwana ba ikatisa ka koketsopedi le go kgaoganya magareng go katiso ya 10.

<p>Bothata: koketsopedi ya 34 → koketsopedi 340 → koketsopedi 3400</p> <p>Morutabana: Re ka dira jang go supa gore koketsopedi 34 ke eng?</p> <p>Reetsa go barutwana ba ba buang ka koketsopedi ya 30 go bona 60 le koketsopedi ya 4 go bona 8, go bona 68.</p> <p>Fa barutwana ba iponela mathata a go balela se ka tlhaloganyo, kwala mokgwa wa go tlhatlhamolola jaaka go bontshitswe.</p> <p>Morutabana: A re ka dirisa se re se itseng ka koketsopedi ya 34 go bona gore koketsopedi ya 340 e ka nna eng?</p> <p>Reetsa barutwana ba ba reng 340 e kgolo go feta ga 10 go 34 ka jalo koketsopedi 340 e kgolo go feta ga 10 go 68 ke 680.</p>	<div style="text-align: center;"> <p>double 34</p> <p>double 34 = 68</p> </div> <p>Koketsopedi 34 = 68</p> <p>Koketsopedi 340 = <input style="width: 50px; height: 20px;" type="text"/></p>
<p>Bothata: halofo ya 46 → halofo ya 460</p> <p>Morutabana: Re ka dira jang go bona gore halofo ya 46 ke eng?</p> <p>Reetsa go barutwana ba ba buang ka halofo ya 40 go bona 20 le halofo ya 6 go bona 3, go bona 23.</p> <p>Fa barutwana ba itemogela mathata ka go balela se ka tlhaloganyo, kwala mokgwa wa go 'tlhatlhamolola' jaaka go bontshitswe.</p> <p>Morutabana: A re ka dirisa se re se itseng ka halofo ya 46 go bona gore halofo ya 460 e ka nna eng?</p>	<div style="text-align: center;"> <p>half of 46</p> <p>half of 46 = 23</p> </div> <p>halofo ya 46 = 23</p> <p>halofo ya 460 = <input style="width: 50px; height: 20px;" type="text"/></p>

Reetsa barutwana ba ba reng 460 e kgolo go feta ga 10 go 46 ka jalo halofo ya 460 e kgolo go feta ga 10 go 23 ke 230.	
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### **Tiro ka nosi**

Jaanong barutwana ba ka thala bubi jwa dintlha tsa nnete jaaka fa godimo, di gokaganya go:

koketsopedi ya 45   koketsopedi ya 27   halofo ya 8   halofo ya 76

koketsopedi ya 450   koketsopedi ya 270   halofo ya 820   halofo ya 760

Rotloetsa barutwana go balela koketsopedi/go hafola magareng tsa ntlha ka tlhaloganyo fa ba kgona le go dirisa dipaterone go araba ka bonako koketsopedi/go hafola magareng jaaka ba kgona.

### **Tirwana ya gae– Pampiri ya tiro 2**

Kwa pheletsong ya thulaganyo ya gompieno neela barutwana pampiri ya tiro 2.

O seka wa lebelela nako fa ba dira tiro e. Maikaelelo ke go fa barutwana tiro ya go ikatisa ka go kwala se ba se dirileng ka tlhaloganyo.

### **Tshegetso ya Vidio**

Koketsopedi le go kgaoganya magareng 7



<https://youtu.be/JJUPpmMdaAw>

Leina:

**Koketsopedi le go kgaoganya magareng: Pampiri ya tiro 2**

<p>i. Koketsopedi ya 32 ke <input type="text"/></p>	<p>ii. Koketsopedi ya 44 ke <input type="text"/></p>
<p>2. <math>26 \times 2 =</math> <input type="text"/></p>	<p>12. <math>38 \times 2 =</math> <input type="text"/></p>
<p>3. <math>42 \div 2 =</math> <input type="text"/></p>	<p>13. <math>86 \div 2 =</math> <input type="text"/></p>
<p>4. Halof o ya 110 = <input type="text"/></p>	<p>14. Halof o ya 104 = <input type="text"/></p>
<p>5. Koketsopedi ya 23 = <input type="text"/></p>	<p>15. Koketsopedi ya 39 = <input type="text"/></p>
<p>6. Halof o ya 36 = <input type="text"/></p>	<p>16. Halof o ya 48 = <input type="text"/></p>
<p><b>Koketsopedi ya 31 ke 62</b></p> <p>7. <math>2 \times 31 =</math> <input type="text"/></p> <p>8. Halof o ya 62 ke <input type="text"/></p> <p>9. <math>31 + 32 =</math> <input type="text"/></p> <p>10. Koketsopedi 31 = <math>30 + 30 +</math> <input type="text"/></p>	<p><b>Koketsopedi ya 49 ke 98</b></p> <p>17. <math>2 \times 49 =</math> <input type="text"/></p> <p>18. Halof o ya 98 is <input type="text"/></p> <p>19. <math>49 + 48 =</math> <input type="text"/></p> <p>20. Koketsopedi 49 = <math>50 + 50 -</math> <input type="text"/></p>



**Kelotlhoko go morutabana**

Mo o ka kwala dintlha ka ga thutiso le se barutwana ba tlhokang thuso ka togamaano ya go kgabaganyetsa go lesome, O ka kwala dintlha tse dingwe tsa dilo tse o batlang go di rarabolola go tshimologo thuto e e latelang.

**Tshegetso ya Vidio**

Koketsopedi le go kgaoganya magareng 8



[https://youtu.be/\\_qp\\_sjlzqLw](https://youtu.be/_qp_sjlzqLw)

## KOKETSOPEDI LE GO KGAOGANYA MAGARENG: TSHIMOLOGO THUTO 8

### Go thutafatsa ga tlhaloganyo motsotso o le 1

Koketsopedi le go kgaoganya magareng ya dipalo tsa botsalano.

### Tatelano ya tirwana

Mo thutong e, re golaganya dintlha tsa nnete tse di tsalanang go koketsopedi kgotsa go kgaoganya magareng ka dintlha tsa nnete tse di neetsweng, go akaretsa go atametsa go koketsopedi.

<p>Bothata: koketsopedi ya 17</p> <p>Botsa barutwana mekgwa e e farologaneng ya go bua se ba se bonang mo taekeramong.</p> <p>Sekai, <math>17 + 18</math> e tshwanetse go feta <math>17 + 17</math> ka 1. Sekai se sengwe ke gore koketsopedi 17 e feta koketsopedi 16 ka 2 gonne setlhopa sengwe le sengwe se na le 1 go feta mo go sona.</p> <p>Tsenya megopolo mengwe le mengwe e e mešwa go tswa go barutwana mo taekeramong.</p> <p>Barutwana bangwe ba ka neela palelo ya go ntsha <math>34 - 17 = 17</math>. Kwala se mo taekeramong fa e neetswe. Go gokaganya tlhakanya le ntsha e rutiwa jaaka togamaano kwa bokhutlong jwa tshimologo ya thuto tse.</p>	
--	--

### Tirwana ka nosi

1. Jaanong barutwana ba tshwantse go thala bubi jwa dintlha tsa nnete jaaka fa godimo, di golagangwa le:

$$\text{Koketsopedi ya } 38 = 76$$

Sekai, ' $38 + 38 = 76$ ' kgotsa 'halofo ya  $760 = 380$ ' kgotsa 'halofo ya halofo ya  $76 = 19$ '

Barutwana ba tshwanetse go tlhalosa dikakanyo tsa bone, sk. "kotara ya 76 ke 19 ka gonne ke ne ka hafola le go hafola gape".

Bolelela barutwana ba SE ba bale ka bo-1.

2. Barutwana ba tshwanetse go leka go araba dipotso tse:

Koketsopedi ya 99 ke eng?

Feleletsa polelo e: Koketsopedi ya 99 = koketsopedi ya 100 – □

Koketsopedi ya 49 ke eng?

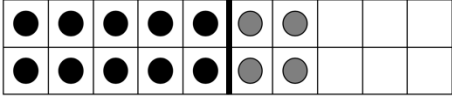
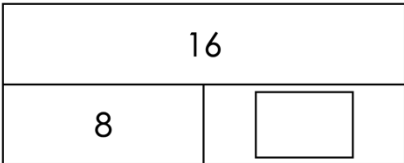
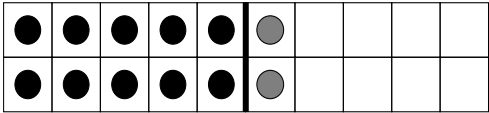
Fa barutwana bangwe le bangwe ba fetsa tirwana ka bonako, ba kope go bopa bubi jo bongwe jo bo golaganyang dintlha tsa nnete ba simolola ka nngwe ya dintlha tsa nnete tsa koketsopedi kgotsa go kgaoganya magareng tse ba di tlhopileng.

Leina:

Koketsopedi le go kgaoganya magareng: Thatlhobo ya bofelo

Karolo I

Metsotso e le 2

<p>1. </p> <p><math>7 + 7 = \square</math></p>	<p>1. <math>14 + 14 = \square</math></p>
<p>2. halof o ya 14 = <math>\square</math></p>	<p>2. <math>7 \times 2 = \square</math></p>
<p>3. <math>9 + 9 = \square</math></p>	<p>3. halof o ya <math>\square = 7</math></p>
<p>4. koketsopedi ya 8 = <math>\square</math></p>	<p>4. koketsopedi ya 100 = <math>\square</math></p>
<p>5. <math>\square \times 2 = 14</math></p>	<p>5. koketsopedi ya 20 = <math>\square</math></p>
<p>6. </p>	<p>6. halof o ya <math>\square = 40</math></p>
<p>7. Koketsopedi ya 10 = <math>\square</math></p>	<p>7. halof o ya 50 = <math>\square</math></p>
<p>8. </p> <p>halof o ya 12 = <math>\square</math></p>	<p>8. <math>18 \div 2 = \square</math></p>
<p>9. <math>10 \div 2 = \square</math></p>	<p>9. halof o ya 30 = <math>\square</math></p>
<p>10. halof o ya 18 = <math>\square</math></p>	<p>20. <math>2 \times 60 = \square</math></p>
<p>Maduo otlhe go tswa go 20</p>	

Koketsopedi le go kgaoganya magareng: Tlhatlhobo ya bofelo

Karolo 2

Metsotso e le 3

1. koketsopedi ya 42 =

2.  $36 \times 2 =$

3.  $64 \div 2 =$

4. halof o ya 102 =

5. koketsopedi ya 99 =

6. halof o ya 38 =

7. halof o ya  = 52

**Koketsopedi ya 39 ke 78**

8. halof o ya 78 ke

9.  $39 + 38 =$

10. koketsopedi ya 39 = 40 + 40 -

Maduo otlhe go tswa go 10

## GO ATAMETSA LE GO BAAKANYA

### Matseno

Tsepamiso mo tshimologong ya dithuto di le tharo tsa ntlha ke go tlhakanya o dirisa go atametsa go palo ya botsalano le go baakanya. Mo tshimologong ya dithuto di le tharo tse di latelang, tsepamo e mo go tloseng o dirisa go atametsa le go baakanya. Tshimologo ya dithuto di le pedi tsa bofelo tsepamo ya go balela ke mo palo e le nngwe go feta e ka atametswa go palo ya botsalano. Dipalo tsa botsalano ke dipalo tse di bonolo go dira ka tsone. Gantsi dipalo tse ke di katiso tsa lesome. Dingwe tsa ditirwana di etelwa pele ke morutabana mo patikwalelo mme tse dingwe ke tsa barutwana go dira ka nosi.

### Bokgoni ba go gopola ka bonako

Go na le mekgwa e le merataro ya bokgoni ba go gopola ka bonako bo barutwana ba tlhokang go ithuta ditogamaano tsa go atametsa le go baakanya:

- Bala o tswelala kgotsa kwa morago ka bo-10 go tswa go palo nngwe le nngwe (sk. 12, 22, 32, or 57, 47, 37, ...)
- tlhakanya kgotsa ntsha 1, 2 le 3 go tswa go palo nngwe le nngwe ntle le go kgabaganyetsa go lesome (sk.  $49 + 1 = 50$  or  $30 - 2 = 28$ ;  $49 + 2 = 51$  or  $52 - 3 = 49$ ).
- tlhakanya katiso ya lesome go palo nngwe le nngwe (sk.  $61 + 20 = 81$ )
- ntsha katiso ya lesome go palo nngwe le nngwe (sk.  $46 - 30 = 16$ )
- itse katiso ya lesome e e gaufi thata (sk. 47 e e gaufi thata le 50; 39 e e gaufi thata le 40)
- itse gore e fitlha jang go katiso ya lesome e e gaufi (sk. 43 ke 3 ntsha go 40; 19 ke 1 ntsha go 20).

Leina:

## Go atametsa le go baakanya: Tlhatlhobo-pele

KAROLO I

Metsotso e le 2

1.  $23 + 30 = \square$

11.  $69 + 2 = \square$

2.  $42 - 3 = \square$

12.  $68 + 10 = \square$

3.  $57 - 10 = \square$

13.  $38 + 3 = \square$

4.  $51 - 2 = \square$

14.  $145 + 30 = \square$

5.  $137 - 20 = \square$

15.  $97 - 60 = \square$

6.  $43 + 40 = \square$

16.  $48 = \square - 2$

7.  $29 = \square - 1$

17.  $49 + \square = 50$

8.  $67 + \square = 70$

18. koketsopedi ya 50 =  $\square$

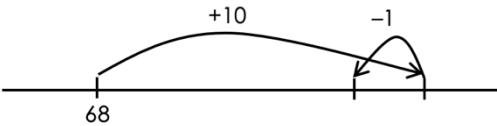
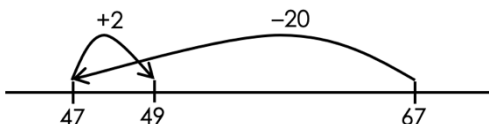
9.  $97 = 100 - \square$

19. koketsopedi ya 100 =  $\square$

10.  $88 + \square = 90$

20.  $28 + \square = 30$

Maduo otlhe go tswa go 20

Go atametsa le go baakanya: Tlhatlhobo-pele					
KAROLO 2	Metsotso e 3				
1.	$34 + 29 = \square$				
2.	$64 - 19 = \square$				
3.	$27 + 98 = \square$				
4.	$234 - 99 = \square$				
5.	$97 + 98 + 99 = \square$				
6.	 $68 + \square = 68 + 10 - 1$				
7.	 $67 - 18 = 67 - 20 + \square$				
8.	$56 + 28 = 56 + \square - 2$				
9.	$84 - 39 = 84 - \square + 1$				
10.	<p>Sekeletsa polelopallo e e neelang karabo e e tshwanang le ya:</p> <p style="text-align: center;"><math>80 - 59</math></p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><math>80 + 60 - 1</math></td> <td style="text-align: center;"><math>80 - 60 - 1</math></td> </tr> <tr> <td style="text-align: center;"><math>80 - 60 + 1</math></td> <td style="text-align: center;"><math>80 + 60 + 1</math></td> </tr> </table>	$80 + 60 - 1$	$80 - 60 - 1$	$80 - 60 + 1$	$80 + 60 + 1$
$80 + 60 - 1$	$80 - 60 - 1$				
$80 - 60 + 1$	$80 + 60 + 1$				
Maduo otlhe go tswa go 10					



**GO ATAMETSA LE GO BAAKANYA: TSHIMOLOGO THUTO 1**

**Go ithutafatsa ga tlhaloganyo motsotso o le 1**

a. Dikologa phaposiborutelo 10 go feta

Morutabana o bua palo mme barutwana ba araba ka dikologa phaposiborutelo ka 10 go feta go palo ya bofelo.

Morutabana: 16

Morutwana 1: 26 → Morutwana 2: 36 → Morutwana 3: 46 → Morutwana 4: 56 jalojalo.

b. Tlhakanya katiso ya 10

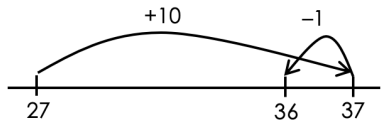
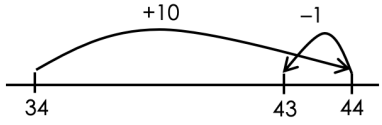
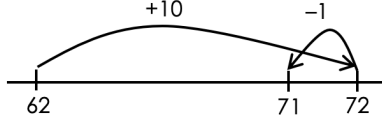
“Ke eng...?”

Morutabana: 43 + 20 → Barutwana: 63

Morutabana: 35 + 20 → Barutwana: 55

Morutabana: 42 + 30 → Barutwana: 72 jalojalo...

**Tatelano ya Tirwana**

<p>Kopa barutwana go neela dikarabo tsa ditirwana mo patikwalelong (tse di neetsweng mo mojang), mme o botse barutwana gore ba lemogile eng.</p> <p>Morutabana: Lo lemogile eng?</p> <p>Barutwana: Go tlhakanya 9 go neela karabo e e tshwanang fa o tlhakanya 10 go nnye ka 1.</p>	<p>Kwala mo patikwalelo:</p> <p>27 + 9 =                    27 + 10 =</p> <p>34 + 9 =                    34 + 10 =</p> <p>62 + 9 =                    62 + 10 =</p>
<p>Morutabana: Dipalo tsa botsalano ke dipalo tse di bonolo go dira ka tsone. Lesome ke palo ya botsalano. Mo togamaanong e, fa re tlhakanya 9, re <b>atametsa</b> 9 go 10. Re dira se ka gonne e gaufi le 10 mme 10 ke palo ya botsalano ka jalo e bonolo go tlhakanya.</p> <p>Re tlhakanya 10 mme re <b>baakanye</b> karabo ya rona ka go ntsha 1 e e oketsang fa re tlhakanya fa re atametsa.</p> <p>Bontsha 27 + 9; 34 + 9 le 62 + 9 ka molapalo mo patikwalelo.</p> <p>Morutabana: Re bitsa togamaano e go <b>Atametsa</b> le go <b>Baakanya</b>.</p> <p>Kopa barutwana go bua mafoko go atametsa le go baakanya kwa godimo le go supa mafoko mo patikwalelo jaaka ba a bua.</p>	<p>27 + 9</p>  <p>34 + 9</p>  <p>62 + 9</p>  <p>Kwala mo patikwalelo: Go atametsa le go baakanya</p>

Mo thutong e, re itsise togamaano ya go atametsa le go baakanya.

### **Tirwana ka nosi**

Barutwana ba tshwanetse go leka go dira dikai tse di latelang ka tlhaloganyo:

$$33 + 9 \quad 48 + 9 \quad 76 + 9 \quad 84 + 9$$

Barutwana ba tshwanetse go tlhalosa dikakanyo tsa bone, sk. “go  $33 + 9$ , ke atametsa 9 go 10 mme ke tlhakanye 10 go 33 go bona 43; ke baakanya karabo ka go ntsha 1, ka jalo karabo ke 42.” Jaaka o boeletsa ditogaamaano tsa barutwana gatelela kwa ba atametsang le go fetola teng.

### **Tshegetso ya Vidio**

Go atametsa le go baakanya 1



<https://youtu.be/jpwwwujejpl>

## GO ATAMETSA LE GO BAAKANYA: TSHIMOLOGO THUTO 2

### Go ithutafala ga tlhaloganyo motsotso o le 1

a. Pop-Fizz: Katiso ya lesome le le gaufi

Morutabana a re 'pop' le barutwana ba re 'fizz'; mme morutabana o bua palo, barutwana ba araba ka palo e nngwe.

Mo phetolelong e, barutwana ba araba ka katiso ya lesome le le gaufi.

Morutabana: pop	→Barutwana: fizz	
Morutabana: 18	→Barutwana: 20	
Morutabana: pop	→ Barutwana: fizz	
Morutabana: 37	→ Barutwana: 40	
Morutabana: pop	→ Barutwana: fizz	
Morutabana: 42	→ Barutwana: 40	
Morutabana: pop	→ Barutwana: fizz	
Morutabana: 33	→ Barutwana: 30	jalojalo...

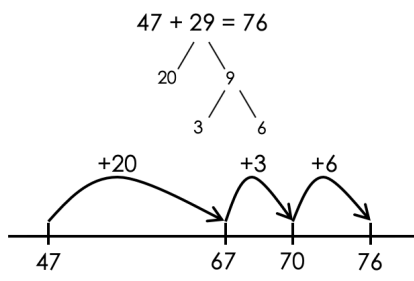
b. Pop-Fizz: O tlolela jang go katiso ya 10 le le gaufi

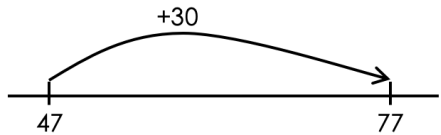
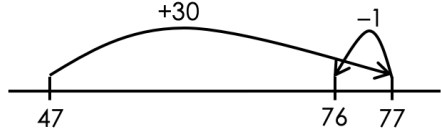
Ka nako e barutwana ba bua se se tshwanetseng go diragala go fitlha go katiso ya lesome le le gaufi

Morutabana: 7	→Barutwana: +3	
Morutabana: 28	→Barutwana: +2	
Morutabana: 19	→Barutwana: +1	
Morutabana: 43	→Barutwana: -3	
Morutabana: 32	→Barutwana: -2	
Morutabana: 11	→Barutwana: -1	jalojalo...

### Tirwana Tatelano

Mo thutong e, re itsise togamaano ya go atametsa le go baakanya ya go tlhakanya.

<p>Botsa barutwana gore ba gopola eng ka togamaano ya go tlola.</p> <p>Morutabana: Erile re dirisa togamaano ya go tlola, re ne re balela <math>47 + 29</math> jang?</p> <p>Letlela barutwana ba tlhalose mokgwa o kope barutwana go bontsha mo patikwalelo. Gopotsa barutwana ka dikgato tsa go: <b>polota, go tlhatlhamolola, go tlola le go araba.</b></p> <p>Barutwana: Tlhakanya 20 go 47 go bona 67, tlhakanya 3 go fitlha go 70, tlhakanya 6 (<math>3 + 6 = 9</math>).</p>	<p>Tiro ya bofelo ya patikwalelo e bontshitswe ka fa tlase:</p> 
<p>Morutabana: Ke palo ya botsalano efe e e gaufi le 29?</p> <p>Barutwana: 30</p>	<p><math>47 + 29</math></p>

<p>Morutabana: Fa re atametsa 29 go 30 mme re tlola 30 kwa pele go tswa go 47 re tla fitlha kae?</p> <p>Barutwana: 77(bontsha se mo patikwalelo)</p> <p>Morutabana: A 77 ke karabo ya bofelo kgotsa re <b>baakanye?</b></p> <p>Kopa barutwana gore ba tihalose thulaganyo ya go baakanya karabo: Reokeditse ka nngwe, ka jalo re tshwanetse ra ntsha nngwe go tswa go karabo go bona 76.</p> <p>Bontsha se go molapalo mo patikwalelo.</p> <p>Bolela barutwana gore mokgwa o wa go atametsa le go fetola o dira sentle fa palo e nngwe e le gaufi thata le palo ya botsalano.</p>	 <p>Tlhakanya go molapalo:</p> 
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**Tirwana ka nosi**

Barutwana ba tshwanetse go leka go dira dikai tse di latelang ka thaloganyo:

26 + 19      54 + 39

Barutwana ba tshwanetse go thalosa dikakanyo tsa bone, sk. “go 26 + 19, ke atametsa 19 go 20 mme ke tlhakanye 20 le 26 go bona 46; ke baakanye karabo ka go ntsha 1, ka jalo karabo ke 45.” Jaaka o boeletsa ditogaamaano tsa barutwana gatelela kwa ba atametsang le go baakanya teng.

**Tshegetso ya Vidio**

Go atametsa le go baakanya 2



<https://youtu.be/fGILndzXfSY>

**GO ATAMETSA LE GO BAAKANYA: TSHIMOLOGO THUTO 3**

**Go ithutafala ga tlhaloganyo motsotso o le 1**

a. Pop-Fizz: Go tlolela jang go katiso ya lesome le le gaufi

b. Dipalelo tsa ka bonako: Ntsha 1, 2 or 3

“Ke eng ...?”

Morutabana:  $63 - 1 \rightarrow$  Barutwana: 62

Morutabana:  $54 - 2 \rightarrow$  Barutwana: 52

Morutabana:  $78 - 1 \rightarrow$  Barutwana: 77

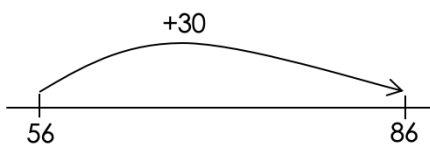
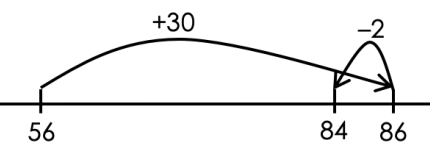
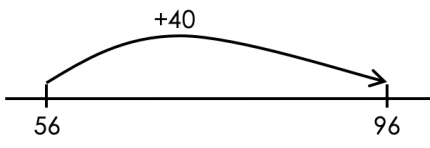
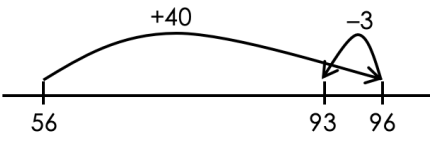
Morutabana:  $61 - 2 \rightarrow$  Barutwana: 59

Morutabana:  $52 - 3 \rightarrow$  Barutwana: 49

jalajalo...

**Tatelano ya Tirwana**

Mo thutong e, re dirisa togamaano ya go atametsa le go baakanya go tlhakanya.

<p>Morutabana: Fa re tlhakanya 28 kgotsa 38 kgotsa 48 go palo, a re kgona go dirisa mokgwa wa go atametsa le go baakanya? A re kgona go o dirisa go rarabolola <math>56 + 28</math>? Ke palo ya botsalano efe e e gaufi le 28?</p> <p>Barutwana: 30</p> <p>Morutabana: Fa re atametsa 28 go 30 mme re tlola 30 go ya kwa pele go tswa go 56, re ya go fitlha kae?</p> <p>Barutwana: 86</p> <p>Morutabana: Re baakanye 86 jang?</p> <p>Kopa barutwana ba tlhalose thulaganyo ya go baakanya karabo: Re tlhakantse le tse dingwe di le pedi, ka jalo re tshwanetse go ntsha di le pedi go tswa go karabo go bona 84.</p> <p>Bontsha se go molapalo mo patikwalelo.</p>	<p><math>56 + 28</math></p>  <p>Tlhakanya go molapalo:</p> 
<p>Morutabana: Fa re tlhakanya 27 kgotsa 37 kgotsa 47 go palo, a re kgona go dirisa mokgwa wa go atametsa le go baakanya? A re kgona go o dirisa go rarabolola <math>56 + 37</math>? Ke palo ya botsalano efe e e gaufi le 37?</p> <p>Barutwana: 40</p> <p>Morutabana: Fa re atametsa 37 go 40 mme re tlola 40 go ya kwa pele go tswa go 56, re ya go fitlha kae?</p> <p>Barutwana: 96</p> <p>Morutabana: Re baakanye 96 jang?</p>	<p><math>56 + 37</math></p>  <p>Tlhakanya go molapalo:</p> 

Kopa barutwana ba tihalose thulaganyo ya go baakanya baakanya karabo: Re tlhakantse le di le tharo tse di okeditsweng, ka jalo re tshwanetse go ntsha di le tharo go tswa go karabo go bona 93.

Bontsha se go molapalo mo patikwalelo.

### Tirwana ka nosi

Barutwana ba tshwanetse go leka go dira dikai tse di latelang ka tlhaloganyo:

$$25 + 18 \quad 44 + 48 \quad 65 + 27$$

Barutwana ba tshwanetse go tihalosa go nagana ga bone, sk. “go  $25 + 18$ , ke atametsa 18 go 20 mme ke tlhakanya ka 20 go 25 go bona 45; ke baakanya karabo ka go ntsha 2, ka jalo karabo ke 43.” Jaaka o boeletsa ditogaamaano tsa barutwana gatelela kwa ba atametsang le go baakanya teng.

### Tshegetso ya Vidio

Go atametsa le go baakanya 3



[https://youtu.be/St5nSH\\_BdRE](https://youtu.be/St5nSH_BdRE)

**GO ATAMETSA LE GO BAAKANYA: TSHIMOLOGO THUTO 4**

**Go ithutafatsa ga tlhaloganyo motsotso o le 1**

a. Dikologa phaposiborutelo 10 go nnye

Morutabana o bua palo mme barutwana ba araba ka go dikologa phaposiborutelo ka 10 go nnye go palo ya bofelo.

Morutabana: 128

Morutwana 1: 118 → Morutwana 2: 108 → Morutwana 3: 98 → Morutwana 4: 88  
jalojalo. jalojalo.

b. Ntsha katiso ya 10

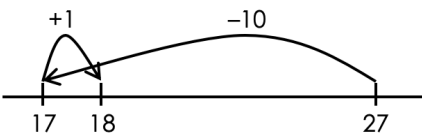
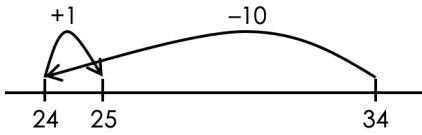
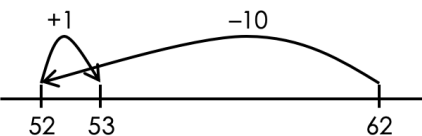
“Ke eng ...?”

Morutabana: 71 – 20 → Barutwana: 51

Morutabana: 59 – 30 → Barutwana: 29 jalojalo...

**Tatelano ya Tirwana**

Mo thutong e, re dirisa togamaano ya go atametsa le go fetola ya go ntsha

<p>Teacher: Re ka dorisa togamaano ya go atametsa le go baakanya go ntsha dipalo tse di gaufi le dipalo tsa botsalano.</p> <p>Fa re dira 27 tlhakanya 9, re tlhakanya 10 mme re baakanye ka go ntsha nngwe. Re ka dira 27 – 9 jaaka 27 – 10 mme re fetole ka go <b>tlhakanya</b> 1 ka gonne re ntshitse e le nngwe e e okeditsweng.</p>	<p>27 – 9 = 27 – 10 tlhakanya 1.</p> 
<p>Morutabana: A re direng dipalelo dingwe tse dintsi go feta re dirisa go atametsa le go baakanya go ntsha 9. Ka jalo 34 – 9 e tshwana le 34 – 10 (go atametsa) le go tlhakanya nngwe gape (go baakanya).</p> <p>Thala molapalo jaaka go bontsha.</p> <p>Morutabana: Ka jalo 34 – 9 = 25.</p> <p>Dira 62 – 9 jaaka sekai se sengwe ka tsela e e tshwanang mme o bontshe molapalo mo patikwalelo.</p>	<p>34 – 9</p>  <p>62 – 9</p> 

**Tirwana ka nosi**

Barutwana ba tshwanetse go leka go dira dikai tse di latelang ka tlhaloganyo:

23 – 9      48 – 9      76 – 9

Barutwana ba tshwanetse go tlhalosa go nagana ga bone, sk. “go 23 – 9, ke atametsa 9 go 10 le go ntsha 10 go 23 go bona 13; ke baakanya karabo ka go tlhakanya 1, ka jalo karabo ke 14.” Jaaka o boeletsa ditogaamaano tsa barutwana gatelela kwa ba atametsang le go baakanya teng.

### **Tirwana ya gae– Pampiri ya tiro 1**

Kwa pheletsong ya thulaganyo ya gompiono neela barutwana pampiri ya tiro 1.

O seka wa lebelela nako fa ba dira tiro e. Maikaelelo ke go fa barutwana tiro ya go ikatisa ka go kwala se ba se dirileng ka tlhaloganyo.

### **Tshegetso ya Vidio**

Go atametsa le go baakanya 4

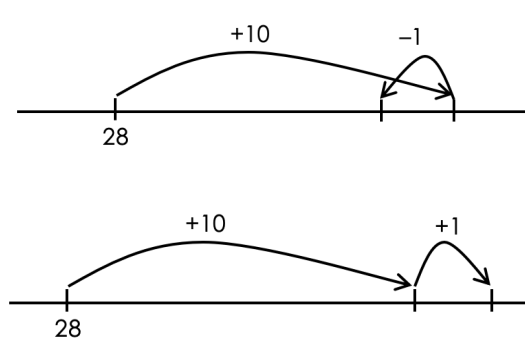
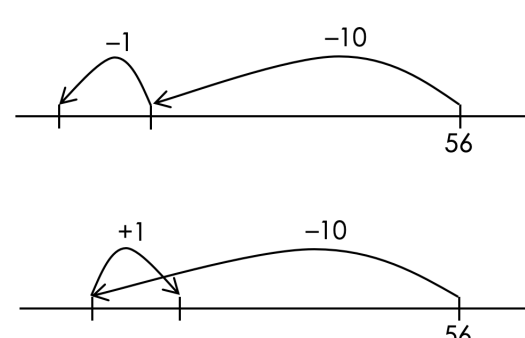


<https://youtu.be/qyCQU1S6M8w>



Leina:

Go Atametsa le go fetola: Pampiri ya tiro I

<p>1. <math>46 + 40 = \square</math></p>	<p>11. <math>21 - 3 = \square</math></p>
<p>2. <math>57 - 10 = \square</math></p>	<p>12. <math>28 + 3 = \square</math></p>
<p>3. <math>32 - 3 = \square</math></p>	<p>13. <math>26 + 30 = \square</math></p>
<p>4. <math>71 - 2 = \square</math></p>	<p>14. <math>115 + 50 = \square</math></p>
<p>5. <math>167 - 70 = \square</math></p>	<p>15. koketsopedi ya 20 = <math>\square</math></p>
<p>6. <math>38 = \square - 2</math></p>	<p>16. <math>19 = \square - 1</math></p>
<p>7. <math>68 + \square = 70</math></p>	<p>17. <math>32 - \square = 30</math></p>
<p>8. <math>99 = 100 - \square</math></p>	<p>18. <math>49 + \square = 50</math></p>
<p>9. koketsopedi ya 200 = <math>\square</math></p>	<p>19. <math>27 = 30 - \square</math></p>
<p>10. Sekeletsa molapalo o o bontshang <math>28 + 9</math></p> 	<p>20. Sekeletsa molapalo o o bontshang <math>56 - 9</math></p> 

**Kelotlhoko go morutabana**

Mo o ka kwala dintlha ka ga thutiso le se barutwana ba santseng ba tlhokang thuso ka ditogamaano tse di farologaneng. O ka kwala dintlha tse dingwe tse o batlang go di rarabolola mo tshimologong ya thuto e e latelang.

Go atametsa le go baakanya

### **Tshegetso ya Vedio**

Go atametsa le go baakanya 5



[https://youtu.be/VQ8va\\_RuHBQ](https://youtu.be/VQ8va_RuHBQ)

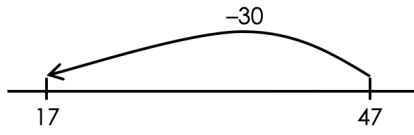
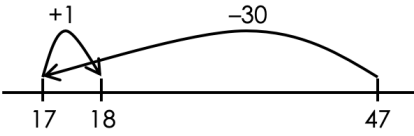
**GO ATAMETSA LE GO BAAKANYA: TSHIMOLOGO THUTO 5**

**Go ithutafatsa ga tlhaloganyo motsotso o le 1**

- a. Dikologa phaposiborutelo 20 go nnye, 30 go nnye
- b. Pop-Fizz: Katiso ya 10 le le gaufi

**Tatelano ya Tirwana**

Mo thutong e, re dirisa togamaano ya go atametsa le go baakanya ya go ntsha.

<p>Morutabana: Re ka dirisa togamaano ya go atametsa le go baakanya jang go rarabolola <math>47 - 29</math>?</p> <p>Fa barutwana ba itemogela bothatha jwa go tlhalosa togamaano, botsa:</p> <p>Morutabana: Ke palo ja tirisonolo efe e e gaufi le 29?</p> <p>Learners: 30</p> <p>Morutabana: Fa re atametsa 29 go 30 le go tloa 30 go ya kwa morago go tswa go 47? Re ka fitlhela kae?</p> <p>Barutwana: 17 (bontsha mo patikwalelo)</p> <p>Morutabana: A 17 ke karabo ya bofelo kgotsa re e <b>fetole</b>?</p> <p>Kopa barutwana ba tlhalose thulaganyo ya go baakanya karabo: Re ntshitse e le nngwe e e okeditsweng, ka jalo re tshwanetse go tlhakaya e le nngwe go karabo go bona 18.</p> <p>Bontsha se go molapalo mo patikwalelo.</p> <p>Bolelela barutwana mokgwa o o dira sentle fa palo e re e ntshang e le e e gaufi thata le palo ya botsalano.</p>	<p><math>47 - 29</math></p>  <p>Tlhakanya go molapalo:</p> 
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**Tirwana ka nosi**

Barutwana ba tshwanetse go leka go dira dikai tse di latelang ka tlhaloganyo:

$28 - 19$        $54 - 39$

Barutwana ba tshwanetse go tlhalosa go nagana ga bone, sk  $28 - 19$ , ke atametsa 19 go 20 le go ntsha 20 go 28 go bona 8; ke baakanya karabo ka go tlhakanya 1, ka jalo karabo ke 9." Jaaka o boeletsa ditogaamaano tsa barutwana gatelela kwa ba atametsang le go baakanya teng.

**GO ATAMETSA LE GO BAAKANYA: TSHIMOLOGO THUTO 6**

**Go ithutafatsa ga tlhaloganyo motsotso o le 1**

a. Pop-Fizz: O tlolela jang go katiso ya 10 le le gaufi (Tlhopha dipalo ka metso 7, 8 le 9, sk.  $27 \rightarrow 30$ ;  $58 \rightarrow 60$ ;  $49 \rightarrow 50$ )

b. Dipalelo tsa ka bonako: Tlhakanya 1, 2 kgotsa 3

“Ke eng ...?”

Morutabana:  $61 + 2 \rightarrow$  Barutwana: 63

Morutabana:  $52 + 3 \rightarrow$  Barutwana: 55

Morutabana:  $77 + 1 \rightarrow$  Barutwana: 78

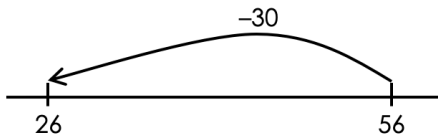
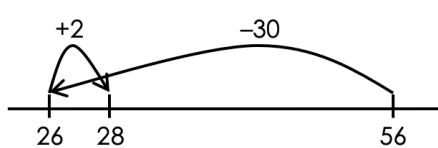
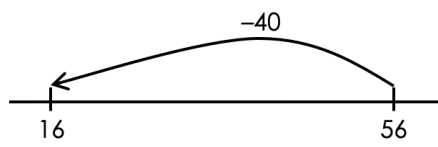
Morutabana:  $69 + 2 \rightarrow$  Barutwana: 71

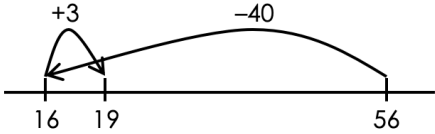
Morutabana:  $58 + 3 \rightarrow$  Barutwana: 61

jalojalo...

**Tatelano ya Tirwana**

Mo thutong e re itsise togamaano ya go atametsa le go baakanya ka go ntsha

<p>Morutabana: Fa re ntsha 28 kgotsa 38 kgotsa 48 go tswa go palo, a re kgona go dirisa mokgwa wa go atametsa le go baakanya? Re ka o dirisa jang go rarabolola <math>56 - 28</math>?</p> <p>Fa barutwana ba itemogela bothatha jwa go tlhalosa togamaano, botsa:</p> <p>Morutabana: Ke palo ya botsalano efe e e gaufi le 28?</p> <p>Barutwana: 30</p> <p>Morutabana: Fa re atametsa 28 go 30 mme re tlolele ga 30 go ya kwa morago go tswa go 56? Re ka fitlhela kae?</p> <p>Barutwana: 26 (bontsha mo patikwalelo)</p> <p>Morutabana: A 26 ke karabo ya bofelo kgotsa re e <b>baakanye</b>?</p> <p>Kopa barutwana ba tlhalose thulaganyo ya go baakanya karabo: Re ntshitse di le pedi tse okeditsweng, ka jalo re tshwanetse go tlhakaya di le pedi go karabo go bona 28.</p> <p>Bontsha se mo molapalong mo patikwalelo.</p>	<p><math>56 - 28</math></p>  <p>Tlhakanya go molapalo:</p> 
<p>Morutabana: Fa re ntsha 27 kgotsa 37 kgotsa 47 go tswa go palo, a re kgona go dirisa mokgwa wa go atametsa le go baakanya? Re ka o dirisa jang go rarabolola <math>56 - 37</math>?</p> <p>Fa barutwana ba itemogela bothatha jwa go tlhalosa togamaano, botsa:</p> <p>Morutabana: Ke palo ya botsalano efe e e gaufi le 37?</p>	<p><math>56 - 37</math></p>  <p>Tlhakanya go molapalo:</p>

<p>Barutwana: 40</p> <p>Morutabana: Fa re atametsa 37 go 40 le go tlola 40 go ya kwa morago go tswa go 56? Re ka fitlhela kae?</p> <p>Barutwana: 16 (bontsha mo patikwalelo)</p> <p>Morutabana: Re ka fetola 16 jang?</p> <p>Kopa barutwana ba tlhalose thulaganyo ya go fetola karabo: re ntsha di le tharo tse di okeditsweng, ka jalo re tshwanetse go tlhakaya di le tharo go karabo go bona 19.</p> <p>Bontsha se go molapalo mo patikwalelo.</p>	
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**Tirwana ka nosi**

Barutwana ba tshwanetse go leka go dira dikai tse di latelang ka tlhaloganyo:

$45 - 18$        $84 - 48$        $65 - 27$

Barutwana ba tshwanetse go tlhalosa go nagana ga bone, sk  $45 - 18$ , ke atametsa 18 go 20 le go ntsha 20 go 45 go bona 25; ke baakanya karabo ka go tlhakanya 2, ka jalo karabo ke 27.” Jaaka o boeletsa ditogaamaano tsa barutwana gatelela kwa ba atametsang le go baakanya teng.

**Tshegetso ya Vidio**

Go atametsa le go baakanya 6



<https://youtu.be/kG9NCQ9gBPY>

**GO ATAMETSA LE GO BAAKANYA: TSHIMOLOGO THUTO 7****Go ithutafatsa ga tlhologanyo motsotso o le 1**

- a. Pop-Fizz: Katiso ya 10 le le gaufi  
 b. Pop-Fizz: Go tlola jang go 10 le le gaufi

**Tatelano ya Tirwana**

Mo thutong e, re dirisa togamaano ya go atametsa le go baakanya palelo mo palo e le nngwe go feta e ka atametswang.

<p>Morutabana: Re ka dirisa go atametsa le go baakanya fa dipalo ka bobedi di le gaufi le dipalo tsa botsalano, sk. <math>19 + 39</math>.</p> <p>Bontsha barutwana mokgwa wa go atametsa le go baakanya <math>19 + 39</math> mo patikwalelo.</p> <p>Jaaka o kwala mo patikwalelo, tlhalosa:</p> <p>Morutabana: Re ka atametsa dipalo ka bobedi go 20 le 40 mme re ditlhakanye go bona 60. Re tlhakantse 1 go palo nngwe le nngwe ka jalo re tshwanetse go baakanya ka go ntsha 2 go 60 go bona 58.</p> <p><i>Elatlhoko: Fa re baakanya dipalo ka bobedi, re bontsha se ka go balela go go kwadilweng go na le gore re e bontshe mo molapalong.</i></p>	$19 + 39$ (atametsa ka bobedi) $= 20 + 40$ le go baakanya $- 2$ $(- 1$ go nngwe le nngwe) $= 60 - 2$ $= 58$
<p>Morutabana: O ka dirisa jang go atametsa le go baakanya <math>28 + 49</math>?</p> <p>Bontsha barutwana mokgwa wa go atametsa le go baakanya palelo e mo patikwalelo.</p>	$28 + 49$ (atametsa ka bobedi) $= 30 + 50$ le go fetola $- 3$ $(- 2$ le $- 1)$ $= 80 - 3$ $= 77$
<p>Morutabana: O ka dirisa jang go atametsa le go baakanya <math>57 + 59 + 48</math>?</p> <p>Bontsha barutwana mokgwa wa go atametsa le go baakanya palelo e mo patikwalelo.</p>	$57 + 59 + 48$ (atametsa tsotlhe) $= 60 + 60 + 50$ le go baakanya $- 6$ $(- 3, - 1, - 2)$ $= 170 - 6$ $= 164$

**Tirwana ka nosi**

Barutwana ba tshwanetse go leka go dira dikai tse di latelang ka tlhologanyo:

$$38 + 29 \quad 57 + 28 \quad 19 + 19 + 19$$

Barutwana ba tshwanetse go tlhalosa go nagana ga bone, sk. "go  $38 + 29$ , ke atametsa 38 go 40 le 29 go 30 le go tlhakanya 40 le 30 go bona 70, Ke baakanya karabo ka go ntsha 3, Ka jalo karabo ke 67." Jaaka o boeletsa ditogaamaano tsa barutwana gatelela kwa ba atametsang le go baakanya teng.

Fa barutwana ba iponela mathata a go tlhalosa tiro ya bone, ba kope go bontsha mokgwa wa bone ka go kwala (jaaka go bontsha mo patikwalelo).

### **Tirwana ya gae– Pampiri ya tiro 2**

Kwa pheletsong ya thulaganyo ya gompieno neela barutwana pampiri ya tiro 2.

O seka wa lebelela nako fa ba dira tiro e. Maikaelelo ke go fa barutwana tiro ya go ikatisa ka go kwala se ba se dirileng ka tlhaloganyo.

### **Tshegetso ya Vidio**

Go atametsa le go fetola 7

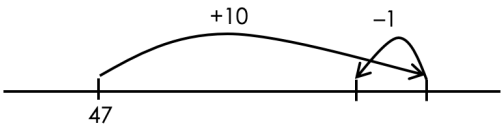
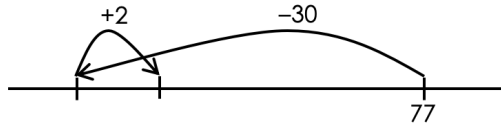


<https://youtu.be/0TOGmefwNxQ>



Leina:

Go atametsa le go baakanya: pampiri ya tiro 2

1.	$56 + 29 =$ <input type="text"/>				
2.	$54 - 38 =$ <input type="text"/>				
3.	$45 + 37 =$ <input type="text"/>				
4.	$325 - 99 =$ <input type="text"/>				
5.	$47 + 49 + 48 =$ <input type="text"/>				
6.	 $47 +$ <input type="text"/> $= 47 + 10 - 1$				
7.	 $77 - 28 = 77 - 30 +$ <input type="text"/>				
8.	$66 + 28 = 66 +$ <input type="text"/> $- 2$				
9.	$95 - 39 = 95 -$ <input type="text"/> $+ 1$				
10.	<p>Sekeletsa polelopallo e e neelang karabo e e tshwanang jaaka:</p> <p style="text-align: center;"><math>80 - 39</math></p> <table style="width: 100%; border: none;"> <tbody> <tr> <td style="text-align: center;"><math>80 + 40 - 1</math></td> <td style="text-align: center;"><math>80 + 40 + 1</math></td> </tr> <tr> <td style="text-align: center;"><math>80 - 40 + 1</math></td> <td style="text-align: center;"><math>80 - 40 - 1</math></td> </tr> </tbody> </table>	$80 + 40 - 1$	$80 + 40 + 1$	$80 - 40 + 1$	$80 - 40 - 1$
$80 + 40 - 1$	$80 + 40 + 1$				
$80 - 40 + 1$	$80 - 40 - 1$				

**Kelotlhoko go morutabana**

Mo o ka kwala dintlha ka ga thutiso le se barutwana ba tlhokang thuso ka ditogamaano tse di farologaneng. O ka kwala dintlha tse dingwe tse o batlang go di rarabolola mo tshimologong ya thuto e e latelang.

**GO ATAMETSA LE GO BAAKANYA: TSHIMOLOGO THUTO 8****Go ithutafatsa ga tlhaloganyo motsotso o le 1**

Dikologa phaposiborutelo 20 go feta, 30 go feta, 30 go nnye, 40 go nnye

**Tatelano ya Tirwana**

Mo thutong e, re tlhopha le go dirisa togamaano e e botoka le go dirisa togamaano ya go atametsa le go baakanya palelo mo go se se bonolo.

<p>Kwala dipara di le nne tsa dipalo mo patikwalelo jaaka go bontshitswe mme o kope barutwana go re:</p> <ul style="list-style-type: none"> <li>• ba ka dirisa togamaano ya go atametsa le go baakanya efe?</li> <li>• ba ka dirisa togamaano dife tse di farologaneng (jaaka togamaano ya go tlola, go kgabaganyetsa go le koketsopedi)</li> </ul> <p>Kopa barutwana go neela mabaka go ditlhopho tsa bone.</p> <p><i>Elatlhoko: 99 + 99 e diriwa jaaka 100 + 100 – 2 e dirisa go atametsa, koketsopedi (koketsopedi 100 ke 200) le go fetola.</i></p> <p>Tlotla le barutwana gore fa ba itse ditogamaano di le dintsi, ba tla kgona go tlhopha togamaano e e ka bonako go dirisiwa, ba ka kopanya ditogamaano.</p>	<p>38 + 49 22 + 36</p> <p>38 – 13 47 – 29</p> <p>29 + 38 + 39 14 + 24 + 33</p> <p>99 + 99</p> <p>45 + 45</p>
<p>Kopa barutwana go buisana gore ba ka dirisa jang go atametsa le go baakanya go rarabolola tse:</p> <p>38 + 49 47 – 29 29 + 38 + 39</p> <p>Barutwana ba tshwanetse go bua sengwe se se tshwanang le se:</p> <ul style="list-style-type: none"> <li>• atametsa 38 go 40 le 49 go 50, tlhakanya 40 le 50 go bona 90, le go fetola ka go ntsha 3 go 90.</li> <li>• atametsa 29 go 30, ntsha 30 go 47 go bona 17, o baakanye ka go tlhakanya 1 kwa morago go bona 18.</li> <li>• Atametsa 29 go 30 le go atametsa ka bobedi 38 le 39 go 40, o tlhakanye 30 le 40 le 40 go bona 110 le go baakanya ka go ntsha 4 go bona 106.</li> </ul>	<p>38 + 49 47 – 29 29 + 38 + 39</p>
<p>Kopa barutwana go feleletsa dipolelo tse ka molomo:</p> <ul style="list-style-type: none"> <li>• Go tlhakanya 18 go palo, ke tlhakanya _____ le go ntsha _____ .</li> </ul>	<p>Tlhakanya 38 e neele karabo e e tshwanang le:</p> <p>+ <input type="checkbox"/> – <input type="checkbox"/></p>

<ul style="list-style-type: none"> <li>Go ntsha 18 go palo, ke ntsha _____ le go tlhakanya _____ .</li> </ul> <p>Kopa barutwana go tlatsa mo mabokosong jaaka go bontshitswe mo patikwalelong.</p>	<p>Ntsha 49 e neele karabo e e tshwanang le:</p> <p style="text-align: center;">- <input type="checkbox"/> + <input type="checkbox"/></p> <p>Tlhakanya 99 e neele karabo e e tshwanang le:</p> <p style="text-align: center;">+ <input type="checkbox"/> - <input type="checkbox"/></p> <p>Ntsha 28 e neele karabo e e tshwanang le:</p> <p style="text-align: center;">- <input type="checkbox"/> + <input type="checkbox"/></p>
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### Tirwana ka nosi

Barutwana ba tshwanetse go leka go dira dikai tse di latelang ka *tlhaloganyo*:

$$29 + 48 \quad 37 - 28 \quad 39 + 28 + 49$$

Barutwana ba tshwanetse go tlhalosa dikakanyo tsa bone, sk. “go 29 + 48, ke atametsa 29 go 30 le 48 go 50 le go tlhakanya 50 le 30 go bona 80, ke baakanya karabo ka go ntsha 3, ka jalo karabo ke 57.” Jaaka o boeletsa ditogaamaano tsa barutwana gatelela kwa ba atametsang le go baakanya teng.

Fa barutwana ba iponela mathata a go tlhalosa tiro ya bone, ba kope go bontsha mokgwa wa bone ka go kwala jaaka go bontshitswe mo patikwalelong.

### Tshegetso ya Vidio

Go atametsa le go baakanya 8



[https://youtu.be/mij\\_d45rw00](https://youtu.be/mij_d45rw00)

Leina:

## Go atametsa le go baakanya: Thatlhobo ya bofelo

Karolo I

Metsotso e le 2

1.  $34 + 20 = \square$

11.  $29 + 2 = \square$

2.  $42 - 3 = \square$

2.  $68 + 10 = \square$

3.  $57 - 10 = \square$

3.  $38 + 3 = \square$

4.  $51 - 2 = \square$

4.  $145 + 30 = \square$

5.  $178 - 30 = \square$

5.  $97 - 60 = \square$

6.  $43 + 40 = \square$

6.  $48 = \square - 2$

7.  $29 = \square - 1$

7.  $79 + \square = 80$

8.  $37 + \square = 40$

8. koketsopedi ya 50 =  $\square$

9.  $97 = 100 - \square$

9. koketsopedi ya 100 =  $\square$

10.  $88 + \square = 90$

20.  $28 + \square = 30$

Maduo otlhe go tswa go 20

## Go atametsa le go baakanya: Tlhatlhobo ya bofelo

Karolo 2

Metsotso e le 3

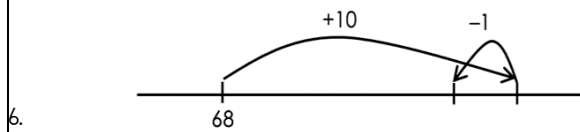
1.  $34 + 19 = \square$

2.  $54 - 29 = \square$

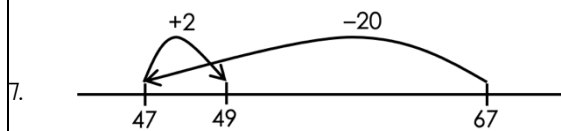
3.  $27 + 98 = \square$

4.  $234 - 99 = \square$

5.  $97 + 98 + 99 = \square$



$68 + \square = 68 + 10 - 1$



$67 - 18 = 67 - 20 + \square$

8.  $56 + 28 = 56 + \square - 2$

9.  $84 - 39 = 84 - \square + 1$

10. Sekeletsa polelopallo e e neelang karabo e e tshwanang le:

$60 - 29$

$60 - 30 + 1$

$60 + 30 + 1$

$60 + 30 - 1$

$60 - 30 - 1$

Maduo 10

## GO RULAGANYA SEŠWA

### **Matseno**

Tshimologo dithuto mo karolong e, e tsepamisitse mo go rulaganyeng sešwa le mo ditseleng tse di farologaneng mo go rulaganyeng sešwa (e fetola go rulaganya ga dipalo mo palelong) e ka dira palelo ya go tlhakanya le go atisa bonolo go ka dira. Gantsi se, ke ka go bona dikgolagano tse di dirang dipalo tsa botsalano tse di bonolo go balela ka. Dipalo tsa botsalano ke dipalo tse di bonolo go dira ka, gantsi ke tsa katiso ya lesome. Dingwe tsa di tirwana di etelwa pele ke morutabana mo patikwalelo mme tse dingwe ke tsa barutwana go dira ba le nosi.

### **Bokgoni ba go gopola ka bonako**

Go na le bokgoni ba go gopola ka bonako bo le bobedi bo barutwana ba tlhokang go ithuta togamaano ya go rulaganya sešwa:


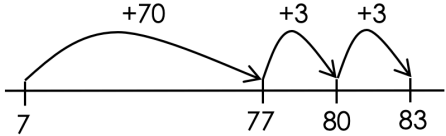
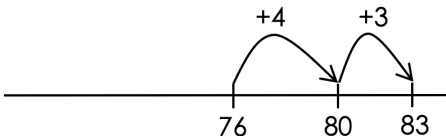
- Temogo ya kgolagano ya dipalo tse di tlhakanyang kgotsa go aga go dira katiso ya 10 (sk. 6 le 4 kgotsa 3 le 7, mme le 16 le 4 kgotsa 32 le 18)
- Temogo ya kgolagano ya dipalo tse di ka atisiwang go dira katiso ya 10 (sk.  $2 \times 5$ ,  $5 \times 4$ ).

Leina:					
Go rulaganya sešwa: Thatlhobo-pele					
KAROLO I	Metsotso e le 2				
1. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 10. 7   4   2   3   9	11. $100 + 14 = \square$				
2. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 10. 5   4   1   6   8	12. $2 \times 5 = \square$				
3. $6 + \square = 10$	13. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 20. 8   14   12   3   19				
4. $9 + 11 = \square$	14. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 20. 15   4   1   16   8				
5. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 100. 24   50   30   38   70	15. $50 \times 2 = \square$				
6. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 100. 51   17   29   49   60	16. $140 + \square = 149$				
7. $20 = 8 + \square$	17. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 30. 18   14   12   7   19				
8. $\square + 3 = 20$	18. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 30. 10   14   9   16   13				
9. <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="padding: 5px;">21</td><td style="padding: 5px;"><input style="width: 30px; height: 20px;" type="text"/></td></tr><tr><td colspan="2" style="padding: 5px; text-align: center;">30</td></tr></table>	21	<input style="width: 30px; height: 20px;" type="text"/>	30		19. $69 + \square = 100$
21	<input style="width: 30px; height: 20px;" type="text"/>				
30					
10. $56 + 30 = \square$	20. $22 + 18 = \square$				
Maduo otlhe go tswa go 20					



Go rulaganya sešwa: Tlhatlhobo-pele	
KAROLO 2	Metsotso e le 3
1.	$6 + 98 = \square$
2.	$17 + 48 + 13 = \square$
3.	$199 + 98 + 1 + 2 = \square$
4.	$37 + 56 + 13 = \square$
5.	$38 + 125 + 15 = \square$
6.	$2 \times 7 \times 5 = \square$
7.	$6 + 98 = 98 + \square$
8.	$96 + 58 + 4 = 100 + \square$
9.	$99 + 97 + 1 + \square = 200$
10.	Sekeletsa dipalo di le pedi tse di botoka go ka tlhakangwa pele mo seteng: 37    88    12
Maduo otlhe go tswa go 10	



<p>Morutabana: Ka jalo fa re tlhakanya dipalo, thulaganyo e re tlhakanyang ka yone ga e kgathalesege.</p>	
<p>Tshwara kgetsi e kgolo mo letsogong le le lengwe, le kgetsi e nnye mo letsogong le lengwe.</p>  <p>Morutabana: Jaanong akanya fela gore ke na le dimonamone di le 7 mo kgetsing e (tsholetsa kgetsi e nnye) le dimonamone di le 76 mo kgetsing e (tsholetsa kgetsi e kgolo), ka jalo ke na le dimonamone di le <math>7 + 76</math>.</p> <p>Kgabaganyetsa mabogo a gago godimo ga lengwe le lengwe pele ga o re:</p> <p>Morutabana: Jaanong mo ke na le <math>76 + 7</math>, mme ke santse ke na le palo ya dimonamone e e tshwanang. Ka jalo <math>7 + 76 = 76 + 7</math></p>	<p>Kwala mo patikwalelo:</p> $7 + 76 = 76 + 7$
<p>Morutabana: A go ka bonako go dira <math>7 + 76</math> kgotsa <math>76 + 7</math>?</p> <p>Dirisa melapalo e le pedi go bontsha go tlhakanya 7 go 76 go ka bonako go na le go tlhakanya 76 le 7 ka gonne go na le metlolo e e mmalwa.</p> <p>Thala melapalo e le pedi go bontsha se.</p> <p><i>Elatlhoko: Molapalo o bontsha tlhakanya 7 ka go tlhakanya 4 go 76 go bona 80, tlhakanya ka 3. Barutwana bangwe ba ka kgona go tlhakanya 7 ka bonako. Se se molemo. Gopotsa barutwana ba se ka ba bala ka bo-nngwe.</i></p>	<p><math>7 + 76</math></p>  <p><math>76 + 7</math></p> 

### Tirwana ka nosi

Ke dipalelo dife tse di ka fa tlase tse di tshwanetseng go rulagangwa sešwa pele go ka balelwa? Barutwana ba ka nna ba dirisa molapalo o o makgwarakgwara go ba thusa fa ba o tlhoka.

$$5 + 46 \quad 86 + 6 \quad 7 + 68 \quad 84 + 9$$

Barutwana ba tshwanetse go tlhalosa dikakanyo tsa bone, sk. “go  $5 + 46$ , ke rulaganya sešwa gore e re  $46 + 5$ , mme ke tlhakanya 4 go 46 go bona 50 ke tlhakanye 1 go 50 go bona 51.”

Bolelela barutwana ba SE bale ka bo-1.

**Tshegetso ya Vedio**

Go rulaganya sešwa 1



<https://youtu.be/FIIM2einnNo>

**Tshegetso ya Vedio**

Go rulaganya sešwa 2



<https://youtu.be/PdZN9ZWaoDQ>

**GO RULAGANYA SEŠWA: TSHIMOLOGO THUTO 2****Go ithutafatsa ga tlhaloganyo motsotso o le 1**

Go golagangwa ga dipalelo (sk.  $8 + 2 \rightarrow 10$ ;  $18 + 2 \rightarrow 20$ ;  $28 + 2 \rightarrow 30$ )

Morutabana o kwala palelo ya pele mo patikwalelo:

$$8 + 2 = 10$$

Morutabana o bolelela barutwana gore 8 tlhakanya 2 e lekana le 10 le go kopa karabo e e golaganyang palelo eo. Supa barutwana ba ba tshwanetseng go araba.

Morutabana:  $18 + 2 \rightarrow$  Morutwana 1: 20

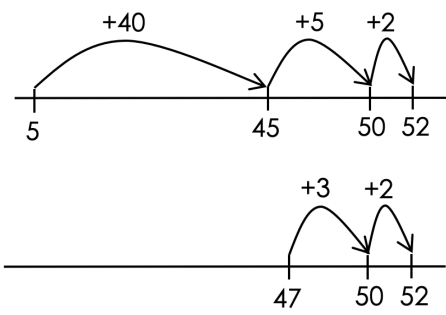
Morutabana:  $28 + 2 \rightarrow$  Morutwana 2: 30

Morutabana:  $38 + 2 \rightarrow$  Morutwana 3: 40

jalajalo...

**Tatelano ya Tirwana**

Mo thutong e, re dirisa togamaano ya go rulaganya sešwa.

<p>Bothata: <math>5 + 47</math></p> <p>Morutabana: go balela <math>5 + 47</math> re ka simolola ka 5 mme re tlolela kwa pele ka 47, kgotsa re ka simolola ka 47 mme re tlolela kwa pele ka 5. Ke efe e e ka nnang ka bonako?</p> <p>Tshwantsha melapalo ya dipalo di le pedi mo patikwalelo gore re bontshe <math>47 + 5</math> e na le metlolo e le mmalwa.</p>	<p><math>5 + 47</math></p> 
<p>Morutabana: Jaanong leba dipalelo tse. Di tsenye mo ditlhopheng di le pedi: dipalelo mo re ka di rulaganyang sešwa go di dira ka bonako le tse di ka nnang fela jalo.</p>	<p>Kwala:</p> <p><math>23 + 9</math>      <math>15 + 47</math>      <math>8 + 63</math></p> <p><math>68 + 7</math>      <math>6 + 93</math>      <math>57 + 26</math></p> <p style="text-align: center;"> <span style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;">Rulaganya sešwa</span> <span style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block; margin-left: 20px;">Se rulaganye sešwa</span> </p>

**Tirwana ka nosi**

Barutwana ba tshwanetse go dirisa ditshwantsho tsa molapalo go dira dipalelo tse di latelang. Barutwana ba tshwanetse go kwala palelo e e rulagantsweng sešwa, tshwantsha molapalo le go kwala karabo:

$$8 + 63 \quad 6 + 97$$

Barutwana ba tshwanetse go tlhalosa dikakanyo tsa bone, sk. “go  $8 + 63$ , ke rulaganya sešwa gore e re  $63 + 8$ , mme ke tlhakanya 7 go 63 go bona 70 ke tlhakanye 1 go 70 go bona 71.”

Bolelela barutwana ba SE bale ka bo-1.

**GO RULAGANYA SEŠWA: TSHIMOLOGO THUTO 3****Go ithutafatsa ga tlhaloganyo motsotso o le 1**

Dikologa phaposi: Dira dipalo tsa botsalano.

Morutabana o kwala dipolelopalo di le tharo tse di golaganyang dipalo tsa botsalano. mo patikwalelo, sk.  $7 + 3 = 10$   $17 + 3 = 20$   $37 + 3 = 40$

O tsamaya mo phaposing, o botsa barutwana dipolelopalo tse dingwe tse di golaganyang le paterone e e dirang dipalo tsa botsalano.. Rekota dikarabo mo patikwalelo.

Morutwana 1:  $47 + 3 = 50$  → Morutwana 2:  $87 + 3 = 90$  → Morutwana 3:  $107 + 3 = 110$  → jj.

Barutwana bangwe ba ka re  $17 + 13 = 30$  kgotsa  $37 + 23 = 60$ . Tse le tsona di ka rekotiwa.

**Tatelano ya Tirwana**

Mo thutong e, re fitlhela kgolagano ya dipalo tsa botsalano go dira palelo ya dipalo di le tharo bonolo.

<p>Bothata: <math>26 + 17 + 4</math></p> <p>Morutabana: Re ka dira palelo e ka thulaganyo e, mme ke bona kgolagano ya dipalo tsa botsalano go polelopalo. Kgolagano ya dipalo tsa botsalano e fa kae?</p> <p>Barutwana: <math>26 + 4 = 30</math></p> <p>Morutabana: 30 ke palo ya botsalano. Jaanong <math>30 + 17</math> ke eng?</p> <p>Barutwana: 47</p> <p>Rotloetsa barutwana go dirisa ditogammano tsa tlhaloganyo tsa go tlola go balela karabo e. Gopotsa barutwana ba SE bale ka bo-1.</p>	<p><math>26 + 17 + 4</math></p> <p style="text-align: center;"> <math display="block">\begin{array}{r} 26 + 17 + 4 \\ \swarrow \quad \searrow \\ 30 \end{array}</math> </p> <p><math>26 + 17 + 4 = 30 + 17</math> <math>= 47</math></p>
<p>Bothata: <math>69 + 47 + 3</math></p> <p>Teacher: Batla kgolagano ya 'botsalano' go palelo e.</p> <p>Barutwana: <math>47 + 3 = 50</math></p> <p>Morutabana: 50 ke palo ya botsalano. Jaanong <math>69 + 50</math> ke eng?</p> <p>Barutwana: 119</p> <p>Rotloetsa barutwana go dirisa ditogammano tsa tlhaloganyo tsa go tlola go balela karabo ya <math>69 + 50</math>. Gopotsa barutwana ba SE bale ka bo-1.</p>	<p><math>69 + 47 + 3</math></p> <p style="text-align: center;"> <math display="block">\begin{array}{r} 69 + 47 + 3 \\ \swarrow \quad \searrow \\ 50 \end{array}</math> </p> <p><math>69 + 47 + 3 = 69 + 50</math> <math>= 119</math></p>

### Tirwana ka nosi

Barutwana ba tshwanetse go leka dikai tse di latelang ka go batla pele kopano ya dipalo tsa botsalano mme morago ba balele karabo:

$$25 + 18 + 5$$

$$44 + 38 + 12$$

$$3 + 65 + 27$$

Barutwana ba tshwanetse go tlhalosa dikakanyo tsa bone, sk. “go  $25 + 18 + 5$ , ke tlhakanya pele 5 go 25 go bona 30, mme morago ke tlhakanye 18 go 30 go bona 48.”

Bolelela barutwana ba SE bale ka bo-1.

### Tshegetso ya Vidio

Go rulaganya sešwa 3



<https://youtu.be/SdnTj8PZX-o>



**Tshegetso ya Vedio**

Go rulaganya sešwa 4



[https://youtu.be/F\\_1UiS4QAQ4](https://youtu.be/F_1UiS4QAQ4)

**GO RULAGANYA SEŠWA: TSHIMOLOGO THUTO 4****Go ithutafatsa ga tlhaloganyo motsotso o le 1**

Ke a re/ O a re: Dira 30/Dira 50

**Tatelano ya Tirwana**

Mo thutong e, re ikatisa go batla kgolagano ya dipalo tsa botsalano go palelo.

<p>Bothata: <math>15 + 47 + 5</math></p> <p>Morutabana: Gompiano re ya go batla dikgolagano tsa dipalo tsa botsalano tse dintsi. A go na le kgolagano ya dipalo tsa botsalano go palelo e e mo patikwalelo?</p> <p>Barutwana: Ee, <math>15 + 5 = 20</math>.</p> <p>Morutabana: Ka jalo <math>20 + 47 =</math> ke eng?</p> <p>Barutwana: 67</p>	$\begin{array}{r} 15 + 47 + 5 \\ \quad \quad \quad \vee \\ \quad \quad \quad 20 \\ 15 + 47 + 5 = 20 + 47 \\ \quad \quad \quad = 67 \end{array}$
<p>Bothata: <math>38 + 27 + 12</math></p> <p>Morutabana: Batla kgolagano ya palo ya botsalano.</p> <p>Barutwana: <math>38 + 12 = 50</math>.</p> <p>Morutabana: Ka jalo <math>50 + 27 =</math> ke eng?</p> <p>Barutwana: 77</p>	$\begin{array}{r} 38 + 27 + 12 \\ \quad \quad \quad \vee \\ \quad \quad \quad 50 \\ 38 + 27 + 12 = 50 + 27 \\ \quad \quad \quad = 77 \end{array}$
<p>Morutabana: Ke palo efe e e ka tsenang mo lebokosong go dira kgolagano ya palo ya botsalano?</p> <p>Barutwana ba tshwanetse go neela dipalo tse di felelang ka 2 go golaganya 38 go dira palo ya tirisonolo, sk. 2, 32, 82 jj. Ba ka neela dipalo tse di felelang ka 3 go golaganya le 27 go dira palo ya botsalano, sk. 3, 13, 53 jj.</p>	$38 + 27 + \square$ $\begin{array}{ll} 38 + 27 + \boxed{32} & 38 + 27 + \boxed{13} \\ 38 + 27 + \boxed{2} & 38 + 27 + \boxed{53} \end{array}$

**Tirwana ka nosi**

Barutwana ba tshwanetse go kwala dipalo di le tlhano tse di farologaneng jaanong tse di ka tsenang mo lebokoso le nngwe le le nngwe go dira kgolagano ya palo ya botsalano.

$$24 + 49 + \square \quad 33 + \square + 29$$

Barutwana ba tshwanetse go tlhalosa dikakanyo tsa bone, sk. "go  $24 + 49$ , ke kgona go kwala palo e e felelang ka 1 go golaganya le 49 kgotsa ke kgona go kwala palo e e felelang ka 6 go golaganya le 24."

**Tirwana ya gae– Pampiri ya tiro 1**

Kwa pheletsong ya thulaganyo ya gompiano neela barutwana pampiri ya tiro 1.

O seka wa lebelela nako fa ba dira tiro e. Maikaelelo ke go fa barutwana tiro ya go ikatisa ka go kwala se ba se dirileng ka tlhaloganyo.

Leina:

## Go rulaganya sešwa: Pampiri-tiro I

<p>Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 10.</p> <p>1. 8 6 2 7 5</p>	<p>11. <math>100 + 57 = \square</math></p>				
<p>Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 10.</p> <p>2. 7 5 4 6 9</p>	<p>12. <math>2 \times 6 = \square</math></p>				
<p>3. <math>8 + \square = 10</math></p>	<p>13. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 30. 9 16 21 7 12</p>				
<p>4. <math>7 + 13 = \square</math></p>	<p>14. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 30. 17 5 13 8 12</p>				
<p>5. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 100. 36 59 64 45 73</p>	<p>15. <math>60 \times 2 = \square</math></p>				
<p>6. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 100. 45 87 37 55 62</p>	<p>16. <math>120 + \square = 128</math></p>				
<p>7. <math>20 = 8 + \square</math></p>	<p>17. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 20. 11 14 6 7 19</p>				
<p>8. <math>\square + 6 = 20</math></p>	<p>18. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 20. 15 12 8 4 11</p>				
<p>9. <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="padding: 5px;">34</td><td style="padding: 5px;"><input style="width: 30px; height: 20px;" type="text"/></td></tr><tr><td colspan="2" style="padding: 5px;">40</td></tr></table></p>	34	<input style="width: 30px; height: 20px;" type="text"/>	40		<p>19. <math display="block">\begin{array}{r} + \\ 87 \end{array}</math> <math>87 + \square = 100</math></p>
34	<input style="width: 30px; height: 20px;" type="text"/>				
40					
<p>10. <math>26 + 12 = \square</math></p>	<p>20. <math>24 + 16 = \square</math></p>				

**Kelotlhoko go morutabana**

Mo o ka kwala dintlha ka ga thutiso le se barutwana ba tlhokang thuso ka ditogamaano tse di farologaneng. O ka kwala dintlha tse dingwe gape tse o batlang go di rarabolola mo tshimologong ya thuto e e latelang.

**Tshegetso ya Vedio**

Go rulaganya sešwa 5



<https://youtu.be/dz79xkmVQy8>

**GO RULAGANYA SEŠWA: TSHIMOLOGO THUTO 5****Go ithutafatsa ga tlhaloganyo motsotso o le 1**

Batla kgolagano ya palo ya botsalano

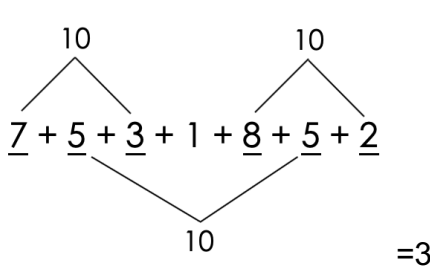
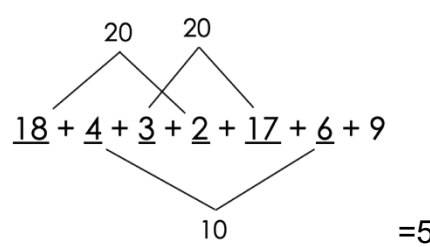
Morutabana o kwala mo patikwalelo:

23    2    8    25    36    17    21    19    44

Morutabana o bua palo nngwe le nngwe, sk. 13, mme barutwana ba tlhopha nngwe ya dipalo mo patikwalelo e e ka dirang palo ya botsalano fa e tlhakangwa go palo eo, sk. 17 e ka dira palo ya botsalano 30 fa e tlhakangwa go 13.

**Tatelano ya Tirwana**

Mo thutong e, re batla dikgolagano tsa dipalo tsa botsalano fa re tlhakanya dipalo tse dintsi.

<p>Bothata: <math>7 + 5 + 3 + 1 + 8 + 5 + 2</math></p> <p>Morutabana: Batla dikgolagano tsa palo ya botsalano?</p> <p>Barutwana: <math>7 + 3 = 10</math>; <math>5 + 5 = 10</math>; <math>8 + 2 = 10</math></p> <p>Tshwaya dikgolagano mo patikwalelo jaaka barutwana ba di bua.</p> <p>Morutabana: Ka jalo <math>7 + 5 + 3 + 1 + 8 + 5 + 2</math> ke <math>10 + 10 + 10 + 1</math> e e leng 31.</p>	<p><math>7 + 5 + 3 + 1 + 8 + 5 + 2</math></p>  <p><math>7 + 5 + 3 + 1 + 8 + 5 + 2 = 31</math></p>
<p>Bothata: <math>18 + 4 + 3 + 2 + 17 + 6 + 9</math></p> <p>Morutabana: Batla dikgolagano tsa palo ya botsalano?</p> <p>Barutwana: <math>18 + 2 = 20</math>; <math>4 + 6 = 10</math>; <math>3 + 17 = 20</math></p> <p>Tshwaya dikgolagano mo patikwalelo jaaka barutwana ba di bua.</p> <p>Morutabana: Ka jalo <math>18 + 4 + 3 + 2 + 17 + 6 + 9</math> ke <math>20 + 20 + 10 + 9</math> e e leng 59</p>	<p><math>18 + 4 + 3 + 2 + 17 + 6 + 9</math></p>  <p><math>18 + 4 + 3 + 2 + 17 + 6 + 9 = 59</math></p>

**Tirwana ka nosi**

Barutwana ba tshwanetse go leka dikai tse di latelang ka tlhaloganyo ka go batla dikgolagano tsa palo ya botsalano mme morago ba dire palelo:

$6 + 3 + 2 + 4 + 9 + 8$        $27 + 32 + 16 + 3 + 8$

Barutwana ba tshwanetse go tlhalosa dikakanyo tsa bone, sk. Sekai sa ntlha, ke tlhakanya 6 go 4 go bona 10, mme ke tlhakanye 2 go 8 go bona 10, mme morago ke tlhakanye 3 le 9 go bona 12 le 10 tlhakanya 10 tlhakanya 12 ke 32.”

Bolelela barutwana ba SE bale ka bo-1.

## GO RULAGANYA SEŠWA: TSHIMOLOGO THUTO 6

### Go ithutafatsa ga tlhaloganyo motsotso o le 1

Pop-Fizz: Atisa ka 5

Morutabana a re 'pop' mme barutwana ba re 'fizz'; Morutabana o bua palo, mme barutwana ba araba ka palo eo atisa ka 5.

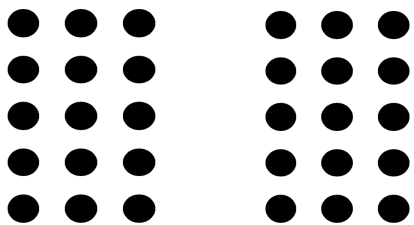
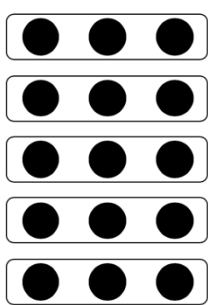
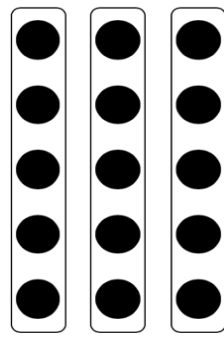
Morutabana: pop	→	Barutwana: fizz	
Morutabana: 2	→	Barutwana: 10	
Morutabana: pop	→	Barutwana: fizz	
Morutabana: 3	→	Barutwana: 15	
Morutabana: pop	→	Barutwana: fizz	
Morutabana: 8	→	Barutwana: 40	
Morutabana: pop	→	Barutwana: fizz	
Morutabana: 9	→	Barutwana: 45	jalojalo...

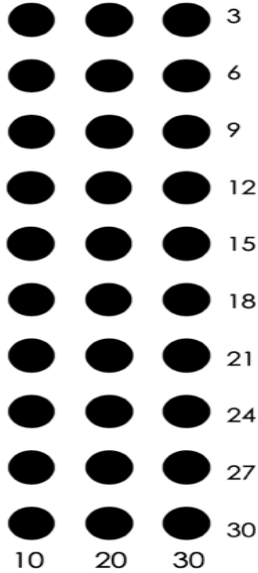
Motshameko o, o ka tshamekiwa go ikatisa go atisa dipalo dingwe le dingwe. Morutabana o tshwanela go tlhalosa palo e barutwana ba tshwanetseng go atisa ka yone kwa tshimologong ya motshameko.

### Tatelano ya Tirwana

Mo thutong e, re itsise go rulaganya sešwa go katiso.

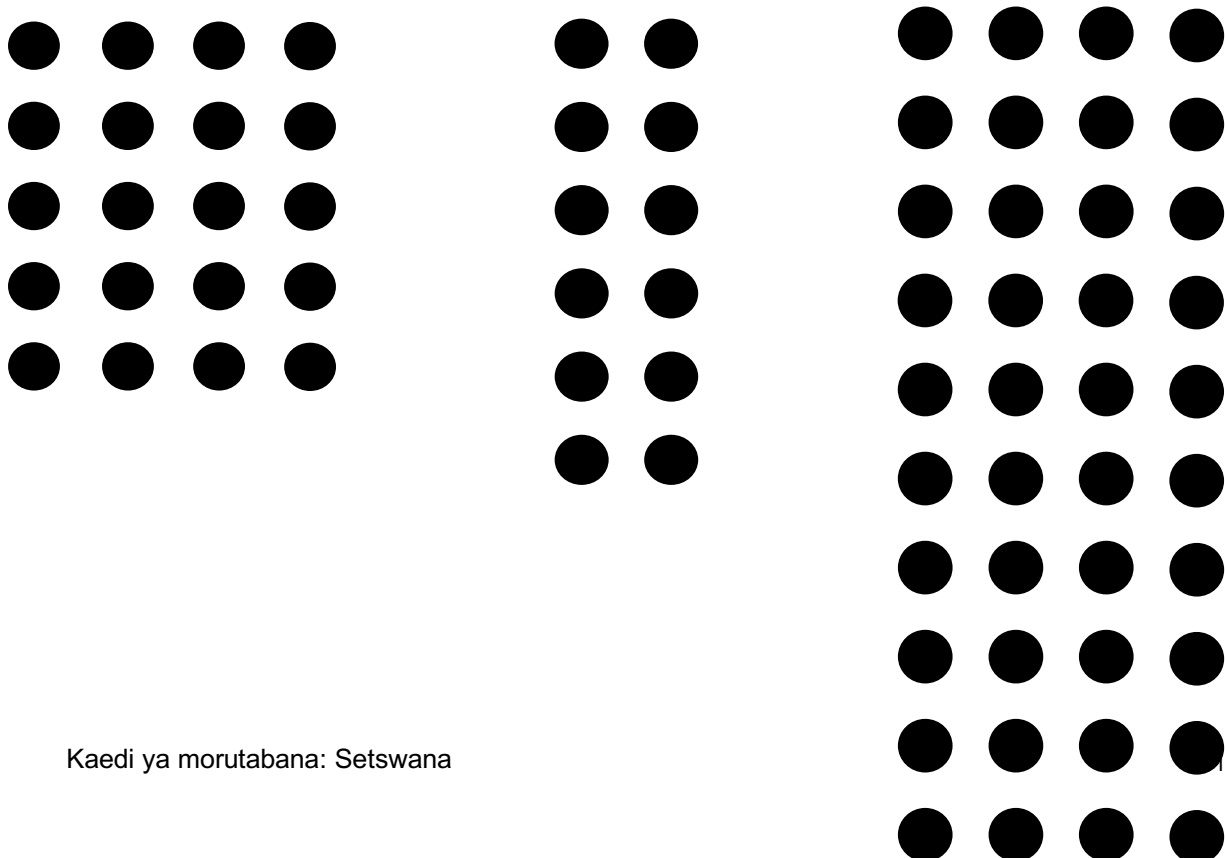
*Elatlhoko: Mela le dikholomo tsa didoto di teng mo bukeng ya Print Master.*

<p>Kgomaretsa dipampitshana di le pedi ka mela e le metlhanano ya didoto di le tharo mo patikwalelo. Dira gore barutwana ba dumalane gore di a tshwana.</p>  <p>Ka go dirisa pampitshana ya ntlha, supa gore re na le didoto di le 5 tsa bo-3 ka go sekeletsa mola mongwe le mongwe mme o kwale 5 x 3 mo patikwalelo.</p> <p>Morutabana: Gotlhelele re bona go na le 3, 6, 9, 12, 15. (Supa mola mongwe le mongwe jaaka o bala)</p> <p>Ka go dirisa pampitshana ya bobedi ka 5 le ka setlhopha sa bo-3, supa gore re na le didoto di le 3 tsa 5 ka go sekeletsa kholomo nngwe le nngwe mme o kwale 3 x 5.</p>	 <p>5 x 3</p>  <p>3 x 5</p> <p><math>5 \times 3 = 3 \times 5</math></p>
--	---

<p>Morutabana: Gotlhelele re bona go na le 5, 10, 15 (Supa kholomo nngwe le nngwe jaaka o bala). Ka jalo re bona <math>5 \times 3 = 3 \times 5</math>.</p> <p>Fela jaaka re dirile ka tlhakanya, re ka fetola le thulaganyo ya go atisa.</p>	
<p>Kgomaretsa pampitshana ya mela e le 10 ya 3 kwa godimo.</p> <p>Morutabana: A re bale gore go na le didoto di le kae mo gotlhelele. (O supa go mela).</p> <p>Barutwana: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30.</p> <p>Morutabana: A re refosane thulaganyo mme re bale ka tsela e (O supa go dikholomo).</p> <p>Barutwana: 10, 20, 30</p> <p>Morutabana: A gone go le ka bonako go bala tsothe tse (o dirisa setshwantso go dira katiso ya 3) kgotsa bala tse (o dirisa setshwantso go dira katiso ya 10)?</p> <p>Ban aba tshwanetse go dumalana gore go bonolo ebile go ka bonako go dira 10, 20, 30.</p>	

**Tirwana ka nosi**

Jaanong barutwana ba tshwanetse go kwala dipalelo di le pedi ka katiso tse di ka dirwang ka go balela palo ya didoto go setshwantsho sengwe le sengwe se se ka fa tlase. Barutwana ba tshwanetse go tlhopha gore ke palelo efe e e bonolo go bona go dira. Ditlhopha tse tsa didoto di mo bukeng ya Print Master mme di ka dirisiwa mo patikwalelo.





**Tshegetso ya Vidio**

Go rulaganya sešwa 6



<https://youtu.be/cCVo9O9ibaE>

**Tshegetso ya Vedio**

Go rulaganya sešwa 7



<https://youtu.be/ZMaAhLcdAQo>

**GO RULAGANYA SEŠWA: TSHIMOLOGO THUTO 7****Go ithutafatsa ga tlhaloganyo motsotso o le 1**

Pop-Fizz: Katiso ka 10

**Tatelano ya Tirwana**

Mo thutong e, re fitlhela dikgolagano tsa palo ya botsalano go palelo ya katiso ya dipalo di le tharo.

<p>Bothata: <math>2 \times 7 \times 5</math></p> <p>Morutabana: Re ka dira palelo e ka thulaganyo e, mme ke kgona go bona kgolagano ya palo ya botsalano. Kgolagano ya palo ya botsalano e fa kae?</p> <p>Barutwana: <math>2 \times 5 = 10</math></p> <p>Morutabana: 10 ke palo ya botsalano. A re dirise seo go dira palelo.</p> <p>Kwala <math>2 \times 7 \times 5 = 2 \times 5 \times 7</math> mo patikwalelo.</p> <p>Morutabana: Re a itse <math>2 \times 5 = 10</math>. Ke eng <math>10 \times 7</math>?</p> <p>Reetsa go barutwana ba ba itseng karabo e, kgotsa ba ba kgonang go bala ba tlola ka bo-10. Gopotsa barutwana ba SE bale ka bo-1.</p> <p>Barutwana: 70</p>	$\begin{array}{c} 2 \times 7 \times 5 \\ \swarrow \quad \searrow \\ 10 \end{array}$  $2 \times 7 \times 5 = 10 \times 7$ $= 70$
--	---

**Tirwana ka nosi**

Jaanong barutwana ba tshwanetse go dirisa dikgolagano tsa palo ya botsalano go araba dipalo tse di latelang:

$$2 \times 6 \times 5 \quad 5 \times 8 \times 2 \quad 9 \times 2 \times 5$$

Barutwana ba tshwanetse go tlhalosa dikakanyo tsa bone, sk. “ $2 \times 6 \times 5$ , Ke itse 2 atisa ka 5 ke lesome, mme 10 atisa ka 6 ke 60, ka jalo karabo ke 60.”

*Elatlhoko: Barutwana ba ka tla ka ditsela tse dingwe tsa bone go dira tse ka bonako. Sekai, morutwana a ka dira  $2 \times 6 \times 5$  ka gore  $6 \times 5 = 30$  le koketsopedi 30 ke 60. E ke palelo e e botoka.*

**Tirwana ya gae– Pampiri ya tiro 2**

Kwa pheletsong ya thulaganyo ya gompiono neela barutwana pampiri ya tiro 2.

O seka wa lebelela nako fa ba dira tiro e. Maikaelelo ke go fa barutwana tiro ya go ikatisa ka go kwala se ba se dirileng ka tlhaloganyo.

Leina:

Go rulaganya sešwa: Pampiri ya tiro 2

1.  $8 + 94 = \square$

2.  $11 + 27 + 19 = \square$

3.  $99 + 198 + 2 + 1 = \square$

4.  $48 + 23 + 12 = \square$

5.  $56 + 115 + 25 = \square$

6.  $2 \times 9 \times 5 = \square$

7.  $3 \times 10 = 10 \times \square$

8.  $9 + 93 = 93 + \square$

9.  $91 + 37 + 9 = 100 + \square$

10.  $99 + 96 + 1 + \square = 200$

11. Sekeletsa dipalo di le pedi tse di botoka go tlhakangwa pele mo seteng e:

74      26      83

12. Sekeletsa dipalo di le pedi tse di botoka go atiswa pele mo seteng e:

2      38      5

**Kelotlhoko go morutabana**

Mo o ka kwala dintlha ka ga thutiso le se barutwana ba tlhokang thuso ka ditogamaano tse di farologaneng. O ka kwala dintlha tse dingwe gore tse o batlang go di rarabolola mo tshimologong ya thuto e e latelang.

**Tshegetso ya Vedio**

Go rulaganya sešwa 8



<https://youtu.be/Sh0e84cPf2U>

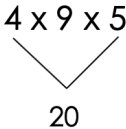
**GO RULAGANYA SEŠWA: TSHIMOLOGO THUTO 8****Go ithutafatsa ga tlhaloganyo motsotso o le 1**

Pop-Fizz: Katiso ka 5

Pop-Fizz: Katiso ka 10

**Tatelano ya Tirwana**

Mo thutong e, re batla kgolagano ya palo ya botsalano botsalano mo teng ga palelo ya katiso.

<p>Bothata: <math>4 \times 9 \times 5</math></p> <p>Morutabana: Re ka dira palelo e ka tatelano e, mme ke kgona go bona kgolagano ya palo ya botsalano. Kgolagano ya palo ya botsalano e fa kae?</p> <p>Barutwana: <math>4 \times 5 = 20</math></p> <p>Morutabana: 20 ke palo ya botsalano. A re dirise se go rulaganya sešwa palelo.</p> <p>Kwala <math>4 \times 9 \times 5 = 4 \times 5 \times 9</math> mo patikwalelo.</p> <p>Morutabana: Re ka rulaganya sešwa le go kwala se jaaka <math>4 \times 5 \times 9</math>. Re itse <math>4 \times 5 = 20</math>. A re dire <math>20 \times 9</math> ka go bala ka bo-20s.</p> <p>Barutwana: 20, 40, 60, 80, 100, 120, 140, 160, 180.</p>	 <p><math>4 \times 9 \times 5</math></p> <p>20</p> $4 \times 9 \times 5 = 4 \times 5 \times 9$ $= 20 \times 9$ $= 180$
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**Tirwana ka nosi**

Jaanong barutwana ba tshwanetse go dirisa dikgolagano tsa palo ya botsalano ka go rulaganya sešwa go araba dipalo tse di latelang:

$$4 \times 3 \times 5 \quad 4 \times 6 \times 5 \quad 5 \times 7 \times 4$$

Barutwana ba tshwanetse go tlhalosa dikakanyo tsa bone, sk  $4 \times 3 \times 5$ , Ke itse 4 atisa ka 5 ke masomepedi, mme 20 atisa ka 3 ke 60, ka jalo karabo ke 60.”

*Elatlhoko: Barutwana ba ka tla ka ditsela tse dingwe tsa bone go dira tse ka bonako. Sekai, morutwana a kana a dira  $4 \times 3 \times 5$  ka gore  $4 \times 3 = 12$  mme  $12 \times 5 = 60$ .  $12 \times 5 = 60$ .  $12 \times 5 = 60$ . E ke palelo e e botoka.*

Leina:

## Go rulaganya sešwa: Thatlhobo ya bofelo

KAROLO I

Metsotso e le 2

1. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 10. 7 4 2 3 9	1. $100 + 32 = \square$				
2. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 10. 5 4 1 6 8	2. $2 \times 5 = \square$				
3. $7 + \square = 10$	3. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 20. 8 14 12 3 19				
4. $9 + 11 = \square$	4. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 20. 15 4 1 16 8				
5. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 100. 24 50 30 38 70	5. $50 \times 2 = \square$				
6. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 100. 51 17 29 49 60	6. $140 + \square = 149$				
7. $20 = 8 + \square$	7. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 30. 18 14 12 7 19				
8. $\square + 3 = 20$	8. Sekeletsa dipalo di le pedi tse di tlhakangwang go fitlha go 30. 10 14 9 16 13				
9. <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="padding: 5px;">21</td><td style="padding: 5px;"><input type="text"/></td></tr><tr><td colspan="2" style="padding: 5px;">30</td></tr></table>	21	<input type="text"/>	30		9. $69 + \square = 100$ $\begin{array}{r} + \\ 69 \\ \hline \end{array}$
21	<input type="text"/>				
30					
10. $56 + 30 = \square$	20. $22 + 18 = \square$				
Maduo otlhe go tswa go 20					



Go rulaganya sešwa: Tlhatlhobo ya bofelo

KAROLO 2

Metsotso e le 3

1.  $8 + 97 = \square$

2.  $27 + 48 + 23 = \square$

3.  $199 + 98 + 1 + 2 = \square$

4.  $37 + 56 + 13 = \square$

5.  $38 + 125 + 15 = \square$

6.  $2 \times 7 \times 5 = \square$

7.  $8 + 97 = 97 + \square$

8.  $96 + 58 + 4 = 100 + \square$

9.  $99 + 97 + 1 + \square = 200$

10. Sekeletsa dipalo di le pedi tse di botoka go tlhakangwa pele mo seteng e:

43	36	14
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Maduo go tswa go 10

## **GO GOKAGANYA GO TLHAKANYA LE GO NTSHA**

### **Matseno**

Tsepamiso mo tshimologong ya dithuto ke ka kamano magareng ga go tlhakanya le go ntsha. Re dirisa kamano e go fetola palelo ya go tswa go tlhakanya go ya go ntsha le go tswa go ntsha go ya go tlhakanya, jaaka togamaano ya palelo. Se se mabapi le go tlhaloganya kamano magareng ga tiriso di le pedi le go tlhaloganya kamano magareng ga dipalo mo dipolelopalong tsa go tlhakanya le go ntsha. Dingwe tsa ditirwana di etelwa pele ke morutabana mo patikwalelo mme tse dingwe ke tsa barutwana go dira ka nosi.

### **Bokgoni ba go gopola ka bonako**

Go na le bokgoni ba go gopola ka bonako dilo di le tharo tse barutwana ba tlhokang go ithuta kamano magareng ga go tlhakanya le go ntsha jaaka togamaano ya go balela:

- Go tlhakanya dijiti e le nngwe go dijiti di le pedi, go akaretsa le go kgabaganyetsa go bo-lesome (sk.  $28 + 4$ ;  $39 + 2$ )
- Go ntsha dijiti e le nngwe go dijiti di le pedi, go akaretsa le go kgabaganyetsa go bo-lesome (sk.  $33 - 5$ ;  $52 - 4$ )
- Go dira ka thelelo le botlhofo ka taekeramo ya bara go bona kamano e e bonolo ya go balela go rarabolola.

Leina:

Go gokaganya go tlhakanya le go ntsha: Tlhatlhobo-pele

KAROLO I

Metsotso e le 2.

1.  $88 + \square = 92$

Tlatsa 15, 5 le 20 go polelopalo e e fa tlase (II-1/4).

15	5
20	

2.  $42 - 4 = \square$

II.  $\square - 5 = \square$

3.  $86 + 5 = \square$

12.  $\square + 5 = \square$

4.  $17 + \square = 23$

13.  $\square - \square = 5$

5.  $199 + \square = 201$

14.  $5 + \square = \square$

Tsenya dipalo di le tharo tse go lebokoso le le nepagetseng:  $11 - 9 = 2$ .

$\square$	$\square$
$\square$	

15.  $99 + \square = 102$

16.  $21 - \square = 19$

17.  $37 + 6 = \square$

8.  $302 - 5 = \square$

18.  $47 + \square = 55$

9.  $29 + \square = 34$

19.  $34 - \square = 29$

10.  $91 - \square = 89$

20.  $75 + \square = 82$

Maduo otlhe go tswa go 20

## Go gokaganya go tlhakanya le go ntsha: Tlhatlhobo-pele

KAROLO 2

Metsotso e le 3

1.  $92 - 88 = \square$

2.  $4 + \square = 402$

3.  $\square - 82 = 5$

4.  $82 - 75 = \square$

5.  $201 - 199 = \square$

6. 

$\square$	99
102	

7.  $27 + 15 = 42$        $42 + 15 = 57$   
 $42 - 15 = \square$

8.  $24 + 42 = 66$        $24 + 18 = 42$   
 $\square + 24 = 42$

Dirisa dipalo di le tharo tse di ka fa tlase go mekgwa e le pedi ya palelo ya go ntsha:

$83 + 37 = 120$

9.  $\square - \square = \square$

10.  $\square - \square = \square$

Maduo otlhe go tswa go 10

## GO GOKAGANYA GO TLHAKANYA LE GO NTSHA: TSHIMOLOGO THUTO 1

### Go ithutafatsa ga tlhaloganyo motsotso o le 1

Go tlhakanya ka bonako: dipalo tsa dijiti e le 1 le dipalo tsa didijiti di le 2

Tlhopha palo ya didijiti di le 2 mme o kope barutwana go tlhakanya dipalo tse di farologaneng ya dijiti e le 1 go yone.

Morutabana: 29 + 4 →	Barutwana: 33	
Morutabana: 29 + 2 →	Barutwana: 31	
Morutabana: 29 + 5 →	Barutwana: 34	
Morutabana: 29 + 7 →	Barutwana: 36	jalojalo...

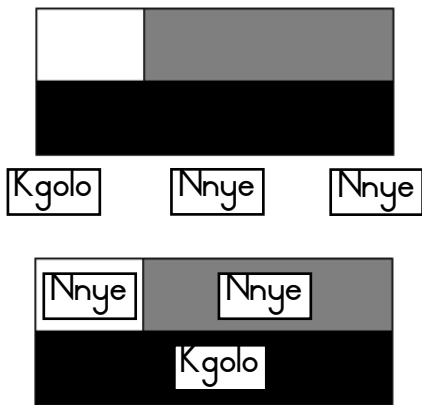
Morutabana: 37 + 5 →	Barutwana: 42	
Morutabana: 37 + 9 →	Barutwana: 46	
Morutabana: 37 + 6 →	Barutwana: 43	
Morutabana: 37 + 3 →	Barutwana: 40	jalojalo...

*Elatlhokotlhoko: Barutwana ba ka bala go ya kwa godimo le ya kwa tlase ka bonako fa ba tlhakanya kgotsa ba ntsha 2, 3, kgotsa 4, fela ba tshwanetse go rotloediwa go dirisa togamaano ya go kgabaganyetsa go lesome go tlhakanya le go ntsha 5, 6, 7, 8, le 9 o dirisa setshwantsho sa tlhaloganyo sa molapalo.*

### Tatelano ya Tirwana

Mo thutong e re dirisa taekeramo ya bara go gokaganya go tlhakanya le go ntsha.

*Elatlhoko: Taekeramo ya bara e ntsho, tshetlha le tshweu e fitlhelwa mo bukeng ya Print Master.*

<p>Morutabana: Mo taekeramong ya bara ya lelapa, dibara di le pedi tse dinnye di kopane di lekana ka go tshwana jaaka bara e kgolo. Fa re lebelela go lekana ga ditshwantsho tsa mmala wa dibara tse di farologaneng (tshweu, tshetlha le ntsho) re bona gore boleele jwa dibara di le 2 tse dinnye di kopane di lekana boleele jwa bara e kgolo.</p> <p>Morutabana: RE bitsa bara e kgolo go feta (ntsho) 'Kgolo' (kgomaretsa lefoko 'Kgolo' go bara e ntsho), mme re bitsa bara nngwe le nngwe ya dibara di le nnye go feta 'nnye' (kgomaretsa lefoko 'Nnye' go bara e nnye go feta).</p> <p>Morutabana: Boleele jwa 'Kgolo bo lekana le nnye tlhakanya le nnye'</p> <p>Kwala palelo mo patikwalelo.</p>	<p>Kgomaretsa taekeramo ya bara fa tlase mo patikwalelo le go kgomaretsa maina (Kgolo, Nnye, Nnye) ka fa tlase ga taekeramo.</p>  <p>Kgolo = Nnye + Nnye</p>
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<p>Morutabana: Neela dipolelo dingwe tsa go tlhakanya le go ntsha go taekeramo ya bara.</p> <p>Barutwana: Kgolo – Nnye = Nnye, jj.</p> <p>Kwala se barutwana ba se neelang, e le nngwe ka nako, kopa phaposi go amogela kgotsa go ganela (ka mabaka).</p> <p>Morutabana: Re a reng ka 'Nnye – Kgolo = Nnye'? (e kwale)</p> <p>Barutwana ba bua gore a polelo ke e siame kgotsa ga e a siama. Botsa barutwana mabaka.</p> <p>Taka mola go polelo e phaposi e dumalanang gore ke nnya (kgotsa ga e a siama). Kwala 'nnya' mo thoko ga yone.</p> <p>Dira se se tshwanang go 'Nnye + Kgolo = Nnye'</p>	<p>Kgolo – Nnye = Nnye</p> <p>Nnye + Nnye = Kgolo</p> <p>Nnye – Kgolo = Nnye?</p> <p><del>Nnye – Kgolo = Nnye</del> nnya</p> <p><del>Nnye + Kgolo = Nnye</del> nnya</p>
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### Tirwana ka nosi

Barutwana ba tshwanetse go leka pampiri ya tirwana ka nosi e e neetsweng go Thuto Tshimologo 1.

### Go gokaganya go tlhakanya le go ntsha Tshimologo Thuto 1: Tirwana ka nosi

Kwala Mafoko Kgolo, Nnye le Nnye mo thoko ga taekeramo ya bara e e siameng ka fa tlase:

3	6
9	

Neela tiki (✓) mo thoko ga polelopalo e e leng ee/siame, le sefapano mo thoko ga polelopalo e e leng nnya/ga e a siama (X):

$3 + 6 = 9$	$6 - 3 = 9$
$9 = 6 + 3$	$9 - 3 = 6$
$6 + 9 = 3$	$3 = 9 - 6$
$6 + 3 = 9$	$9 - 6 = 3$
$3 + 9 = 6$	$3 - 6 = 9$

Go gokaganya go tlhakanya le go ntsha

### **Tshegetso ya Vidio**

Go gokaganya go tlhakanya le go ntsha 1



<https://youtu.be/nha592FZEAc>

**GO GOKAGANYA GO TLHAKANYA LE GO NTSHA: TSHIMOLOGO THUTO 2**

**Go ithutafatsa ga tlhaloganyo motsotso o le 1**

Go ntsha ka bonako: dipalo tsa dijiti e le 1 le dipalo tsa didijiti di le 2

Tlhopha palo ya dijiti di le 2 mme o kope barutwana go ntsha dipalo tse di farologaneng tsa dijiti e le 1 go yone.

Morutabana:  $71 - 1 \rightarrow$  Barutwana: 70  
 Morutabana:  $71 - 3 \rightarrow$  Barutwana: 68  
 Morutabana:  $71 - 5 \rightarrow$  Barutwana: 66  
 Morutabana:  $71 - 7 \rightarrow$  Barutwana: 64 jalojalo...

Morutabana:  $42 - 2 \rightarrow$  Barutwana: 40  
 Morutabana:  $42 - 4 \rightarrow$  Barutwana: 38  
 Morutabana:  $42 - 6 \rightarrow$  Barutwana: 36  
 Morutabana:  $42 - 9 \rightarrow$  Barutwana: 33 jalojalo...

**Tatelano ya Tirwana**

Mo thutong e re bontsha kamano magareng ga dipalo tsa go tlhakanya le go ntsha go dipalo tsa lelapa.

<p>Morutabana: A o kgona go nagana gore dipalo 4, 6 le 10 di ka golagangwa jang?</p> <p>Barutwana ba ka ntsha megopolo ya bone ka kamano jaaka 'nne le thataro ke lesome', kgotsa 'fa re ntsha nne mo go lesome re bona thataro', kgotsa '<math>4 + 6 = 10</math>' kgotsa '<math>10 - 4 = 6</math>'.</p> <p>Kwala megopolo ya barutwana o le mongwe ka nako, o kope phaposi gore e bue gore megopolo e siame kgotsa ga e a siama (ka mabaka). Tlosa mgopolo e e sa siamang.</p> <p>Morutabana: Dipalo 4, 6 le 10 di a gokaganya fa re tlhakanya le go ntsha. Di ka tsewa jaaka <b>dipalo tsa lelapa</b>. Mo taekeramong ya bara ya dipalo tsa lelapa, dipalo di le pedi tse dinnye di lekana go tshwana jaaka palo e kgolo. Mo, boleele jwa <math>4 + 6</math> (di le pedi tse dinnye go tsa lelapa) di lekana le boleele jwa 10 (E kgolo go tsa lelapa).</p> <p>Taka taekeramo ya bara.</p> <p>Morutabana: Dipalo dingwe di le tharo tse di gokaganyang fa re tlhakanya le go ntsha ke 8, 3 le 5. Dipalo tse le tsone ke <b>dipalo tsa lelapa</b>. Dipalo tse di</p>	<p>Kwaka 4, 6 le 10 mo patikwalelo.</p> <p style="text-align: center;">4      6      10</p> <p>nne le thataro ke lesome</p> <p>lesome ntsha thataro e lekana le nne</p> <p><math>4 + 6 = 10</math></p> <p><math>6 + 4 = 10</math></p> <p><math>10 - 6 = 4</math></p> <p><math>10 - 4 = 6</math></p> <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <tr> <td style="padding: 5px;">4</td> <td style="padding: 5px;">6</td> </tr> <tr> <td colspan="2" style="text-align: center; padding: 5px;">10</td> </tr> </table> <p>Kwala 8, 3 le 5 mo patikwalelo.</p> <p style="text-align: center;">8      3      5</p> <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <tr> <td style="width: 50px; height: 20px;"></td> <td style="width: 50px; height: 20px;"></td> </tr> <tr> <td colspan="2" style="height: 20px;"></td> </tr> </table>	4	6	10					
4	6								
10									



<p>gokaganya jang mo taekeramong ya bara?</p> <p>Taka taekeramo ya bara e e se nang sepe jaaka e bontshitswe.</p> <p>Barutwana ba gokaganya 8, 3 le 5 le kwa palo nngwe le nngwe e tsenang teng mo taekeramo ya bara.</p> <p>Kwala se morutwana a ne a se neetse jaaka pele. Kwala se se amogelesegileng mo patikwalelo go dikholomo di le pedi. O ka tlhoka go thusa barutwana ka dikarabo di le 2 tsa bofelo go kholomo nngwe le nngwe ka go dirisa ditshwantsho jaaka:</p> <p><math>8 = \square + \square</math>; <math>3 = \square - \square</math>; <math>5 = \square - \square</math></p> <p>Morutabana: Go palo ya lelapa nngwe le nngwe re kgona go dira dipolelo palo di le 4 tsa go tlhakanya le di le 4 tsa go ntsha. A re boele go sekai sa rona sa bofelo go bona gore ga re a tlogela sepe.</p> <p>Rekota dipolelopalo tsa 8, 3 le 5 tse di tlogetsweng.</p>	<table border="1"> <thead> <tr> <th>+ palelo</th> <th>– palelo</th> </tr> </thead> <tbody> <tr> <td><math>5 + 3 = 8</math></td> <td><math>8 - 3 = 5</math></td> </tr> <tr> <td><math>3 + 5 = 8</math></td> <td><math>8 - 5 = 3</math></td> </tr> <tr> <td><math>8 = 5 + 3</math></td> <td><math>5 = 8 - 3</math></td> </tr> <tr> <td><math>8 = 3 + 5</math></td> <td><math>3 = 8 - 5</math></td> </tr> </tbody> </table>	+ palelo	– palelo	$5 + 3 = 8$	$8 - 3 = 5$	$3 + 5 = 8$	$8 - 5 = 3$	$8 = 5 + 3$	$5 = 8 - 3$	$8 = 3 + 5$	$3 = 8 - 5$
+ palelo	– palelo										
$5 + 3 = 8$	$8 - 3 = 5$										
$3 + 5 = 8$	$8 - 5 = 3$										
$8 = 5 + 3$	$5 = 8 - 3$										
$8 = 3 + 5$	$3 = 8 - 5$										

### Tirwana ka nosi

Barutwana ba tshwanetse go dira le molekane mme ba thale taekeramo ya bara ya dipalo tsa lelapa 7, 9 le 16. Jaanong ba tshwanetse go kwala palelo tsa go tlhakanya di le 4 le tsa go ntsha di le 4 go dipalo tsa lelapa.

Tsamaya mo phaposing o tlhokomedisa tiro ya dipara le go thusa fa go tlhokega.

### Tshegetso ya Vidio

Go gokaganya go tlhakanya le go ntsha 2



<https://youtu.be/fKPfCfF0w1I>

**GO GOKAGANYA GO TLHAKANYA LE GO NTSHA: TSHIMOLOGO THUTO 3**

**Go ithutafatsa ga tlhaloganyo motsotso o le 1**

- a. Go tlhakanya ka bonako: dipalo tsa dijiti e le 1 le dipalo tsa didijiti di le 2
- b. Go ntsha ka bonako: dipalo tsa dijiti e le 1 le dipalo tsa didijiti di le 2

**Tatelano ya Tirwana**

Mo thutong e, re ikatisa ka go gokaganya go tlhakanya le go ntsha re dirisa taekeramo ya bara.

<p>Morutabana: Dipalo 17, 5 le 22 di a gokaganya fa re tlhakanya le go ntsha. Ke dipalo tsa lelapa.</p> <p>Thala taekeramo ya bara e e se nang sepe jaaka e bontshitswe.</p> <p>Barutwana ba gokaganya 17, 5 le 22 le kwa palo nngwe le nngwe e tshwanetse go ya teng mo taekeramong ya bara.</p> <p>Kwala se barutwana ba se neetseng pele go dikholomo di le pedi tsa palelo ya go tlhakanya le go ntsha. Tlosa tse di sa siamang. O ka tlhoka go thusa barutwana ka dikarabo di le 2 tsa bofelo go kholomo nngwe le nngwe ka go dirisa ditshwantsho jaaka:</p> <p><math>22 = \square + \square</math>; <math>5 = \square - \square</math>; <math>17 = \square - \square</math></p> <p>Morutabana: Go palo ya lelapa nngwe le nngwe re kgona go dira dipolelo palo di le 4 tsa go tlhakanya le di le 4 tsa go ntsha. A re boele go sekai sa rona sa bofelo go bona fa re tlogetse dingwe.</p> <p>Rekota dipolelopalo tsa 17, 5 le 22 tse di tlogetsweng.</p>	<p>Kwala 17, 5 le 22 mo patikwalelo.</p> <p style="text-align: center;">17      5      22</p> <div style="border: 1px solid black; width: 100%; height: 60px; margin: 10px 0;"></div> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr> <th style="padding: 5px;">+ palelo</th> <th style="padding: 5px;">– palelo</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;"><math>5 + 17 = 22</math></td> <td style="padding: 5px;"><math>22 - 17 = 5</math></td> </tr> <tr> <td style="padding: 5px;"><math>17 + 5 = 22</math></td> <td style="padding: 5px;"><math>22 - 5 = 17</math></td> </tr> <tr> <td style="padding: 5px;"><math>22 = 5 + 17</math></td> <td style="padding: 5px;"><math>5 = 22 - 17</math></td> </tr> <tr> <td style="padding: 5px;"><math>22 = 17 + 5</math></td> <td style="padding: 5px;"><math>17 = 22 - 5</math></td> </tr> </tbody> </table>	+ palelo	– palelo	$5 + 17 = 22$	$22 - 17 = 5$	$17 + 5 = 22$	$22 - 5 = 17$	$22 = 5 + 17$	$5 = 22 - 17$	$22 = 17 + 5$	$17 = 22 - 5$
+ palelo	– palelo										
$5 + 17 = 22$	$22 - 17 = 5$										
$17 + 5 = 22$	$22 - 5 = 17$										
$22 = 5 + 17$	$5 = 22 - 17$										
$22 = 17 + 5$	$17 = 22 - 5$										

**Tirwana ka nosi**

Jaanong barutwana ba tshwanetse go dira pampiri ya tirwana ka nosi e e neetsweng go thuto tshimologo 3.

Barutwana ba tshwanetse go tsenya palo ya balelapa go taekeramo ya bara e e nepagetseng. Ba tshwanetse go amanya go lekana ga dipalo tse di nnye le go lekana ga dibara tse di nnye.

Leina:

**Go gokaganya go tlhakanya le go ntsha Tshimologo Thuto 3: Tirwana ka nosi**

Kwala dipalo tsa balelapa tse di latelang go taekeramo ya bara e e nepagetseng ka fa tlase. Jaanong kwala dipolelalo di le nne tsa go tlhakanya le go ntsha go palo nngwe le nngwe ya balelapa.

$$5 + 5 = 10 \quad 3 + 4 = 7 \quad 11 + 1 = 12 \quad 9 = 2 + 7$$

Simolola ka  $5 + 5 = 10$ . Ke taekeramo efe e e amanyang le  $5 + 5$ ?

Elatlhoko gore  $5 + 5 = 10$  e na le fela dipolelalo di le pedi tsa go tlhakanya le di le pedi tsa go ntsha.

<table border="1" style="width: 100%; height: 100%;"> <tr> <td style="width: 50%; height: 30px;"></td> <td style="width: 50%; height: 30px;"></td> </tr> <tr> <td colspan="2" style="height: 30px;"></td> </tr> </table> <p>Tlhakanya:</p> <hr/> <hr/> <hr/> <hr/> <p>Ntsha:</p> <hr/> <hr/> <hr/> <hr/>					<table border="1" style="width: 100%; height: 100%;"> <tr> <td style="width: 75%; height: 30px;"></td> <td style="width: 25%; height: 30px;"></td> </tr> <tr> <td colspan="2" style="height: 30px;"></td> </tr> </table> <p>Tlhakanya:</p> <hr/> <hr/> <hr/> <hr/> <p>Ntsha:</p> <hr/> <hr/> <hr/> <hr/>					<table border="1" style="width: 100%; height: 100%;"> <tr> <td style="width: 50%; height: 30px;"></td> <td style="width: 50%; height: 30px;"></td> </tr> <tr> <td colspan="2" style="height: 30px;"></td> </tr> </table> <p>Tlhakanya:</p> <hr/> <hr/> <hr/> <hr/> <p>Ntsha:</p> <hr/> <hr/> <hr/> <hr/>					<table border="1" style="width: 100%; height: 100%;"> <tr> <td style="width: 50%; height: 30px;"></td> <td style="width: 50%; height: 30px;"></td> </tr> <tr> <td colspan="2" style="height: 30px;"></td> </tr> </table> <p>Tlhakanya:</p> <hr/> <hr/> <hr/> <hr/> <p>Ntsha:</p> <hr/> <hr/> <hr/> <hr/>				

Go gokaganya go tlhakanya le go ntsha

### **Tshegetso ya Vedio**

Go golaganya go tlhakanya le go ntsha 3



<https://youtu.be/r02iTWJMfP0>

Go gokaganya go tlhakanya le go ntsha

### **Tshegetso ya Vidio**

Go gokaganya go tlhakanya le go ntsha 4



<https://youtu.be/KPsfH209EEM>

**GO GOKAGANYA GO TLHAKANYA LE GO NTSHA: TSHIMOLOGO THUTO 4**

**Go ithutafatsa ga tlhaloganyo motsotso o le 1**

Thala taekeramo ya bara go kopanya dipalo di le 3 go tswa go 1-20. Dikai di le pedi di neetsweng ka fa tlase. Thala taekeramo ya bara e e bonalang e lekana le dipalo.

7	3
10	

4	9
13	

Jaanong kopa barutwana ba go neele dipolelopalo tse di farologaneng tsa go tlhakanya le go ntsha tse di ka dirang mo taekeramong ya bara. Jaaka barutwana ba neela dipolelopalo tse di kgonegang, supa dipalo go taekeramo ya bara.

Dira gore barutwana ba neele dipolelopalo ka bobedi tsa go tlhakanya le go ntsha:

sk.  $7 + 3 = 10$     $3 + 7 = 10$     $10 - 3 = 7$     $10 - 7 = 3$

Rotloetsa barutwana ba neele dipolelopalo mo 'karabo' e tlang pele, sk.  $10 = 7 + 3$   
 $10 = 3 + 7$     $3 = 10 - 7$     $7 = 10 - 3$

*Elatlhoko: Go na le dipolelopalo di le 8 tse di kgonegang jaaka di le 8 kwa godimo tse di dirang go taekeramo ya bara nngwe le nngwe. Barutwana ga ba tshwanela go neela tsotlhe di le 8 tse di kgonegang, fela go molemo go ba rotloetsa go neela tse di farologaneng.*

**Tatelano ya Tirwana**

Mo thutong e, re dirisa go gokaganya go tlhakanya le go ntsha go kwala dipalelo tse di farologaneng ka disete tse di tshwanang tsa dipalo.

<p>Tshwara maina kwa godimo 'Kgolo' 'Nnye' le 'Nnye'.</p> <p>Morutabana: Re ithutile gore go na le Bara e le 1 e kgolo le dibara di le 2 tse di nnye go dipalo tsa balelapa. Re bitsa dibara Kgolo, Nnye le Nnye (tshwara maina kwa godimo). Ke mang yo o ka thusang go neela maina a dibara go taekeramo ya bara e?</p> <p>Bitsa morutwana go kgomaretsa maina mo thoko ga dibara.</p> <p>Morutabana: Ke batla re tsenye palo ya lelapa 15, 5 le 10 mo taekeramo ya bara.</p> <p>Kwala 15, 5 le 10 mo patikwalelo. Gopotsa barutwana gore palo e kgolo go feta e tla ya kwa bareng e e kwadilweng Kgolo mme di le pedi tse dinnye go feta di tla ya kwa bareng e e kwadilweng Nnye. Tlatsa dipalo ka thuso go tswa go barutwana. Fa ba fetola 10 le 5, gopotsa barutwana gore go lekana ga bara go tshwanetse go amanye le go lekana ga palo.</p>	<p>Thala taekeramo ya bara mo tlase mo patikwalelo.</p> <table border="1" style="margin: 10px auto;"> <tr> <td style="width: 50px; height: 30px;"></td> <td style="width: 50px; height: 30px;"></td> </tr> <tr> <td colspan="2" style="height: 30px;"></td> </tr> </table> <table border="1" style="margin: 10px auto;"> <tr> <td style="width: 50px; height: 30px; text-align: center;">Nnye</td> <td style="width: 50px; height: 30px; text-align: center;">Nnye</td> </tr> <tr> <td colspan="2" style="height: 30px; text-align: center;">Kgolo</td> </tr> </table> <p style="text-align: center; margin: 10px 0;">15      5      10</p> <table border="1" style="margin: 10px auto;"> <tr> <td style="width: 50px; height: 30px; text-align: center;">10</td> <td style="width: 50px; height: 30px; text-align: center;">5</td> </tr> <tr> <td colspan="2" style="height: 30px; text-align: center;">15</td> </tr> </table>					Nnye	Nnye	Kgolo		10	5	15	
Nnye	Nnye												
Kgolo													
10	5												
15													

<p>Morutabana: Neela dipolelopalo dingwe tsa lelapa 15, 5 le 10.</p> <p><i>Elatlhoko: Ga re tlhoke go bona dipolelo tsotlhe tsa dipalo tsa balelapa. Se o batlang go se bona ke gore a barutwana ba tlhologanya kamano magareng ga dipalo. Fa 'nnya' nngwe le nngwe e dirilwe, gopotsa phaposi ka dipolelo tsa Ee le Nnya tse ba di ithutileng mo nakong e e fetileng,</i></p> <p>sk. <del>Nnye</del> <del>Kgolo</del> = <del>Nnye</del> <b>Nnya</b></p>					
<p>Bothata: 25 – 22</p> <p>Morutabana: Fa re leka go dira palelo ka 22 re balela morago go tswa go 25 go ka re tsaya sebaka se seleele. Re itse go thala taekeramo ya bara ya palo ya lelapa le go batla tsela e e bonolo go bona palo e e tlogetsweng. Palo ya 25 ke e Kgolo mme 22 ke nngwe ya tse Dinnye.</p> <p>Thala taekeramo ya bara mme o tlatse 22 le 25.</p> <p>Morutabana: Bara e, e nnye thata ka gone 22 le 25 (Supa taekeramo) di gaufi le go kopana. Ka jalo go bonolo go botsa '22 tlhakanya le eng e lekana 25?' (supa taekeramo fa o ntse o bua se; kwala polelo) kgotsa '25 tlosa eng e lekana le 22?' (supa taekeramo; kwala polelo). Ke itse go batla karabo ka bonako ka go balela kwa godimo go tswa go 22, kgotsa ka go balela kwa tlase go tswa go 25.</p> <p>Balela palo e e tlogetsweng le barutwana.</p> <p>Kwala '3' mo bareng e nnye mo lebokosong le le se nang sepe mo polelopalong.</p> <p>Morutabana: Fa re bone palo e e tlogetsweng re itse go bona dipolelo tsotlhe tsa go tlhakanya le go ntsha tse di ka dirwang ka palo ya lelapa.</p> <p>Gopotsa barutwana ka dipolelo dingwe tse di ka dirwang jaaka o supa dibara.</p> <p>Morutabana: (Go kaya bothata jwa ntlha) Re badile ga 3 go bona karago go na le go bala ga 22. Re ka lebelela taekeramo ya bara go batla palelo e e bonolo.</p>	<p>25 – 22 = <input type="text"/></p> <table border="1"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="text-align: center;">22</td> </tr> <tr> <td colspan="2" style="text-align: center;">25</td> </tr> </table> <p>Kwala palelo:  <math>22 + \square = 25</math>  <math>25 - \square = 22</math></p> <p>Tlogela taekeramo le dipolelo mo patikwalelo.</p>		22	25	
	22				
25					

### Tirwana ya nosi

Barutwana ba tshwanetse go leka dikai tse di latelang ka go kopolola taekeramo ya bara le go tlatsa dipalo tse di neetsweng. Barutwana ba tshwanetse go kwala palelo tse di ka bonako go batla karabo.

$21 - 17 = \square$


$28 - 25 = \square$


Barutwana ba tshwanetse go kwala Kgolo le Nnye mo dipotsong go tlhalosa go nagana ga bone. sk. "Go  $21 - 17$ , ke fetola palelo ka go balela kwa godimo go tswa go 17 go ya go 21 ka go dira  $17 + \square = 21$ " kgotsa "ke itse go fetola palelo go  $21 - 17$  go balela kwa tlase go tswa go 21 go ya go 17 ka go dira  $21 - \square = 17$ ."

### Tirwana ya gae: Pampiri-tiro 1

Kwa pheletsong ya thulaganyo ya gompiono neela barutwana pampiri ya tiro 1.

O seka wa lebelela nako fa ba dira tiro e. Maikaelelo ke go fa barutwana tiro ya go ikatisa ka go kwala se ba se dirileng ka tlhaloganyo.



Leina:

Go gokaganya go tlhakanya le go ntsha: Pampiri ya tiro I

<p>1. <math>67 + \square = 72</math></p>	<p>Tlatsa 17, 3 le 20 go polelotlase e e fa tlase (II - I4).</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding: 5px;">17</td> <td style="padding: 5px;">3</td> </tr> <tr> <td colspan="2" style="text-align: center; padding: 5px;">20</td> </tr> </table>	17	3	20			
17	3						
20							
<p>2. <math>54 - 6 = \square</math></p>	<p>II. <math>\square - 3 = \square</math></p>						
<p>3. <math>78 + 7 = \square</math></p>	<p>12. <math>\square + 3 = \square</math></p>						
<p>4. <math>26 + \square = 34</math></p>	<p>13. <math>\square - \square = 3</math></p>						
<p>5. <math>99 + \square = 102</math></p>	<p>14. <math>3 + \square = \square</math></p>						
<p>6. Tlatsa dipalo tse tharo tse mo mabokosong: <math>13 - 8 = 5</math></p> <table border="1" style="margin-left: auto; margin-right: auto; width: 100%;"> <tr> <td style="width: 33%; height: 40px; vertical-align: middle; text-align: center;"><math>\square</math></td> <td style="width: 33%; height: 40px; vertical-align: middle; text-align: center;"><math>\square</math></td> <td style="width: 33%; height: 40px; vertical-align: middle; text-align: center;"><math>\square</math></td> </tr> <tr> <td colspan="3" style="height: 40px; vertical-align: middle; text-align: center;"><math>\square</math></td> </tr> </table>	$\square$	$\square$	$\square$	$\square$			<p>15. <math>198 + \square = 202</math></p> <p>16. <math>31 - \square = 28</math></p>
$\square$	$\square$	$\square$					
$\square$							
<p>7. <math>206 - 8 = \square</math></p>	<p>17. <math>46 + 8 = \square</math></p>						
<p>8. <math>48 + \square = 54</math></p>	<p>18. <math>55 + \square = 63</math></p>						
<p>9. <math>81 - \square = 78</math></p>	<p>19. <math>64 - \square = 59</math></p>						
<p>10. <math>39 + \square = 44</math></p>	<p>20. <math>65 + \square = 72</math></p>						

**Kelotlhoko go morutabana**

Mo o ka kwala dintlha ka ga thutiso le se barutwana ba tlhokang thuso ka ditogamaano tse di farologaneng. O ka kwala dintlha tse dingwe tse o batlang go di rarabolola mo tshimologong ya thuto e e latelang.

**GO GOLAGANYA GO TLHAKANYA LE GO NTSHA: TSHIMOLOGO THUTO 5**

**Go ithutafatsa ga tlhaloganyo motsotso o le 1**

Go dira ka ditaekeramo

**Tatelano ya Tirwana**

Mo thutong e, re batla kamano ya palelo e e bonolo ya palelo ya tlhakanya mo nngwe ya dipalo e tlositswe.

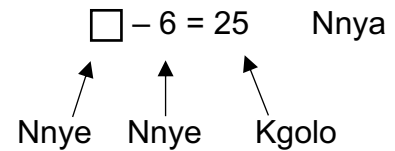
<p>Bothata: <math>6 + \square = 25</math>   <math>\square + 3 = 28</math></p> <p>Morutabana: Mo thutong ya bofelo re kgona go fetola palelo go nna bonolo go gokaganya go balela ga go tlhakanya kgotsa go ntsha go batla palo e e tlogetsweng. Lebelela dipalelo tse mo patikwalelo.</p> <p>Thala taekeramo ya bara e e senang sepe mme o dire le barutwana go aga taekeramo ya bara go dipalelo.</p> <p>Morutabana: Nthuse go feleletsa ditaekeramo tsa bara go dipalelo tse.</p> <p>Kopa barutwana go go laela gore o thale mela kae mo godimo ga dibara le go kwala palo nngwe le nngwe kae.</p> <p>Morutabana: Go bonolo go araba 25 ntsha 6 (supa dipalo mo bareng) kgotsa 28 ntsha 3 (supa dipalo mo bareng).</p> <p>Dira dipalelo tse le barutwana, o dirisa go kgabaganyetsa go lesome ko go tlhokegang (sk. 25 – 5 ke 20 le 20 – 1 ke 19, ka jalo <math>25 - 6 = 19</math>).</p> <p>Kwala karabo mo bareng e e senang sepe le jaaka le bontsha mo lebokosong le le senang. Tlatsa polelopalo ya ntlha/pele.</p> <p>Morutabana: Re fitlhela go le bonolo go rarabolola dipalelo tsa go tlhakanya ka go di fetolela go dipalelo tsa go ntsha.</p>	<p>Kwala palelo le ditaekeramo tse di senang sepe jaaka di bontshitswe:</p> <p><math>6 + \square = 25</math>                      <math>\square + 3 = 28</math></p> <div style="display: flex; justify-content: space-around;"> <table border="1" style="width: 100px; height: 40px;"> <tr><td> </td></tr> <tr><td> </td></tr> </table> <table border="1" style="width: 100px; height: 40px;"> <tr><td> </td></tr> <tr><td> </td></tr> </table> </div> <div style="display: flex; justify-content: space-around;"> <table border="1" style="width: 100px; height: 40px;"> <tr><td>6</td><td> </td></tr> <tr><td colspan="2" style="text-align: center;">25</td></tr> </table> <table border="1" style="width: 100px; height: 40px;"> <tr><td> </td><td>3</td></tr> <tr><td colspan="2" style="text-align: center;">28</td></tr> </table> </div> <p><math>25 - 6 = \square</math>                      <math>28 - 3 = \square</math></p> <div style="display: flex; justify-content: space-around;"> <table border="1" style="width: 100px; height: 40px;"> <tr><td>6</td><td>19</td></tr> <tr><td colspan="2" style="text-align: center;">25</td></tr> </table> <table border="1" style="width: 100px; height: 40px;"> <tr><td>25</td><td>3</td></tr> <tr><td colspan="2" style="text-align: center;">28</td></tr> </table> </div> <p><math>25 - 6 = \boxed{19}</math>                      <math>28 - 3 = \boxed{25}</math></p> <div style="display: flex; justify-content: space-around;"> <p style="text-align: center;">↓</p> <p style="text-align: center;">↓</p> </div> <p><math>6 + \boxed{19} = 25</math>                      <math>\boxed{25} + 3 = 28</math></p>					6		25			3	28		6	19	25		25	3	28	
6																					
25																					
	3																				
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6	19																				
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<p>Morutabana: Re bone fa re na le dipalelo tse di thata tsa go tlhakanya le go ntsha re kgona go bona fa go na le mokgwa wa go di fetola go di dira bonolo. Fela ga re kgonne go difetolela go palelo nngwe le nngwe.</p> <p>Morutabana: A ke kgona go fetola <math>6 + \square = 25</math> go <math>\square - 6 = 25</math>?</p> <p>Kwala dipalelo mo patikwalelo. Bolelela barutwana gore polelopalo e tshwanetse go gokagangwa go</p>	<p>A ke kgona go fetola...?</p> <p><math>6 + \square = 25</math> go <math>\square - 6 = 25</math></p> <div style="text-align: center; margin-top: 20px;"> <p><math>6 + \square = 25</math>    Ee</p> <div style="display: flex; justify-content: center; gap: 20px;"> <div style="text-align: center;">↑ Nnye</div> <div style="text-align: center;">↑ Nnye</div> <div style="text-align: center;">↑ Kgolo</div> </div> </div>																				

utlwala go ya ka mogopolo wa Kgolo, Nnye, Nnye mo taekeramo ya bara.

Thusa barutwana go nagana gore ke dipolelopallo dife tse di ka kwalwang Kgolo, Nnye le Nnye mme o di kwale. Bua ka gore a Nnye + Nnye = Kgolo go dira tlhaloganyo kgotsa ga go dire tlhaloganyo. Botsa gore a ke Ee kgotsa Nnya.

Thusa phaposi go kwala  $\square - 6 = 25$  ka mokgwa o o tshwana le go swetsa fa 'Nnye - Nnye = Kgolo' e le Ee kgotsa Nnya.

Barutwana ba tshwanetse go lemoga gore  $\square - 6 = 25$  ke **nnya** go palo e ya lelapa. Tsenya Ee le Nnya go dipolelopallo.



### Tirwana ka nosi

Jaanong barutwana ba tshwanetse go leka dikai tse di latelang. Go nngwe le nngwe ba tshwanetse go thala taekeramo ya bara le go kwalolola polelopallo jaaka palelo e e bonolo go batla palo e e tlogetsweng. Fa barutwana ba iponela mathata, ba rotloetse go kwala dibara jaaka Kgolo, Nnye le Nnye.

$$7 + \square = 32 \quad \square + 3 = 104$$

### Tshegetso ya Vidio

Go gokaganya ka go tlhakanya le go ntsha 5



<https://youtu.be/bkmaf0ArzuY>

**GO GOKAGANYA GO TLHAKANYA LE GO NTSHA: TSHIMOLOGO THUTO 6**

**Go ithutafatsa ga tlhaloganyo motsotso o le 1**

Go dira ka ditaekeramo tsa bara

**Tatelano ya Tirwana**

Mo thutong e, re dirisa go gokaganya go tlhakanya le go ntsha go dira palelo ya go ntsha bonolo.

<p>Bothata: <math>\square - 30 = 9</math>      <math>30 - \square = 9</math></p> <p>Morutabana: Mo thutong ya bofelo re kgona go fetola palelo go nna bonolo go gokaganya go balela ga go tlhakanya kgotsa go ntsha go batla palo e e tlogetsweng. Lebelela dipalelo tse mo patikwalelo.</p> <p>Thala taekeramo ya bara e e senang sepe mme o dire le barutwana go aga taekeramo ya bara go dipalelo.</p> <p>Morutabana: Nthuse go feleletsa ditaekeramo tsa bara go dipalelo tse. A taekeramo ya bara ya go tshwana kgotsa ya go farologana.</p> <p>Barutwana ba tshwanetse go bontsha gore di farologane.</p> <p>Mo sekaing sa ntlha ( <math>\square - 30 = 9</math> ), e e sa itsegeng ke e Kgolo mme 30 le 9 ke tse Dinnye.</p> <p>Mo sekaing sa bobedi ( <math>30 - \square = 9</math> ), 30 ke e Kgolo mme e e sa itsegeng le 9 ke tse Dinnye.</p> <p>Kopa barutwana go go laela gore o thale mela kae mo godimo ga dibara le go kwala palo nngwe le nngwe kae. Fa barutwana ba iponela mathata, ba rotloetse go kwala dibara mo taekeramong ya bara jaaka Kgolo, Nnye le Nnye.</p> <p>Tswelela ka go kopa barutwana ba eletlhoko gore ke efe e e tshwanang le gore ke efe e e farologaneng go ditaekeramo tsa bara di le pedi.</p> <p>Kwala palelo e e latelang mo tlase ga taekeramo ya bara e e siameng jaaka go bontshitswe: <math>30+9= \_</math>  <math>30 - \_ = 9</math></p>	<p>Kwala palelo le ditaekeramo tse di senang sepe jaaka di bontshitswe:</p> <p><math>\square - 30 = 9</math>                      <math>30 - \square = 9</math></p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="width: 50px; height: 20px;"></td> <td style="width: 50px; height: 20px;"></td> </tr> <tr> <td style="width: 50px; height: 20px;"></td> <td style="width: 50px; height: 20px;"></td> </tr> </table> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="width: 50px; text-align: center;">30</td> <td style="width: 20px; text-align: center;">9</td> <td style="width: 50px; text-align: center;"> </td> <td style="width: 20px; text-align: center;">9</td> </tr> <tr> <td colspan="2" style="border: none;"></td> <td style="text-align: center;">30</td> <td style="border: none;"></td> </tr> </table> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td style="width: 50px; text-align: center;">30</td> <td style="width: 20px; text-align: center;">9</td> <td style="width: 50px; text-align: center;"> </td> <td style="width: 20px; text-align: center;">9</td> </tr> <tr> <td colspan="2" style="border: none;"></td> <td style="text-align: center;">30</td> <td style="border: none;"></td> </tr> </table> <p style="text-align: center;"><math>30 + 9 = \square</math>      <math>30 - \square = 9</math></p>					30	9		9			30		30	9		9			30	
30	9		9																		
		30																			
30	9		9																		
		30																			

<p>Dira le barutwana go balela dikarabo go <math>30 + 9</math> (gokaganya taekeramo ya bara ya ntlha) le <math>30 - 9</math> (gokaganya taekeramo ya bara ya bobedi).</p> <p>Dira le barutwana go tsenya karabo e e nepagetseng go palelo le taekeramo ya bara jaaka go bontshitswe.</p> <p>Tsenya polelopalo ya ntlha/pele. Bontsha barutwana gore go dira <math>30 + 9</math> go re thusitse go rarabolola <math>\square - 30 = 9</math> le go dira <math>30 - 9</math> gore re thusitse go rarabolola <math>30 - \square = 9</math>.</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 2px 10px;">30</td> <td style="border: 1px solid black; padding: 2px 10px;">9</td> </tr> <tr> <td colspan="2" style="border: 1px solid black; padding: 2px 10px; text-align: center;">39</td> </tr> </table> </td> <td style="border: 1px solid black; padding: 5px; text-align: center;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 2px 10px;">21</td> <td style="border: 1px solid black; padding: 2px 10px;">9</td> </tr> <tr> <td colspan="2" style="border: 1px solid black; padding: 2px 10px; text-align: center;">30</td> </tr> </table> </td> </tr> <tr> <td style="padding: 5px; text-align: center;"> <math>30 + 9 = \boxed{39}</math>                  ↓             </td> <td style="padding: 5px; text-align: center;"> <math>30 - 9 = \boxed{21}</math>                  ↓             </td> </tr> <tr> <td style="padding: 5px; text-align: center;"> <math>\boxed{39} - 30 = 9</math> </td> <td style="padding: 5px; text-align: center;"> <math>30 - \boxed{21} = 9</math> </td> </tr> </table>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 2px 10px;">30</td> <td style="border: 1px solid black; padding: 2px 10px;">9</td> </tr> <tr> <td colspan="2" style="border: 1px solid black; padding: 2px 10px; text-align: center;">39</td> </tr> </table>	30	9	39		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 2px 10px;">21</td> <td style="border: 1px solid black; padding: 2px 10px;">9</td> </tr> <tr> <td colspan="2" style="border: 1px solid black; padding: 2px 10px; text-align: center;">30</td> </tr> </table>	21	9	30		$30 + 9 = \boxed{39}$ ↓	$30 - 9 = \boxed{21}$ ↓	$\boxed{39} - 30 = 9$	$30 - \boxed{21} = 9$
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 2px 10px;">30</td> <td style="border: 1px solid black; padding: 2px 10px;">9</td> </tr> <tr> <td colspan="2" style="border: 1px solid black; padding: 2px 10px; text-align: center;">39</td> </tr> </table>	30	9	39		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 2px 10px;">21</td> <td style="border: 1px solid black; padding: 2px 10px;">9</td> </tr> <tr> <td colspan="2" style="border: 1px solid black; padding: 2px 10px; text-align: center;">30</td> </tr> </table>	21	9	30							
30	9														
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30															
$30 + 9 = \boxed{39}$ ↓	$30 - 9 = \boxed{21}$ ↓														
$\boxed{39} - 30 = 9$	$30 - \boxed{21} = 9$														

**Tirwana ka nosi**

Jaamong barutwana ba tshwanetse go leka dikai tse di latelang ka go thala taekeramo ya bara le go kwalolola polelopalo jaaka palelo e e bonolo go batla palo e e tlogetsweng:

$25 - \square = 9$        $\square - 25 = 9$

Barutwana ba tshwanetse go tlhalosa dikakanyo tsa bone, sk. “go  $25 - \square = 9$ , ke kgona go fetola palelo go  $25 - 9$ . Fa ke ntsha 9 go 25, ke bona 16 ka gonne  $25 - 9 = 16$  le  $20 - 4 = 16$ . Se se raya gore  $25 - \boxed{16} = 9$ .”

**Tshegetso ya Vedio**

Go gokanya go tlhakanya le go ntsha 6



<https://youtu.be/OnF8U7aBPOc>

**GO GOKAGANYA GO TLHAKANYA LE GO NTSHA: TSHIMOLOGO THUTO 7**

**Go ithutafatsa ga tlhaloganyo motsotso o le 1**

- a. Go tlhakanya ka bonako: dipalo tsa dijiti e le 1 le dipalo tsa didijiti di le 2 (dirisa dipalo dingwe tse di kgolo tse di ka neelang dikarabo tse di ka fetang 100 le 200, sk.  $99 + 2$ ;  $99 + 4$ ;  $198 + 4$ ;  $199 + 3$ )
- b. Go ntsha ka bonako: dipalo tsa dijiti e le 1 go dipalo tsa didijiti di le 2 (dirisa dipalo dingwe tse di fetang 100 le 200, sk.  $101 - 2$ ;  $103 - 4$ ;  $203 - 4$ ;  $201 - 3$ )

**Tirwana ka nosi**

Mo thutong e, re gokaganya go tlhakanya le go ntsha go rarabolola bonolo dipalelo tsa go tlhakanya le go ntsha go dipalo tse dikgolo.

<p>Morutabana: A re dirise se re se ithutileng go rarabolola dipalelo dingwe ka dipalo tse dikgolo. A o kgona go batla go gokaganya ga dipalo 105, 10 le 95?</p> <p>Thala taekeramo ya bara e e se nang sepe jaaka e bontshitswe.</p> <p>Morutabana: dipalo 105, 10 le 95 di a gokaganya fa re tlhakanya le go ntsha. Re ka di akanya jaaka palo ya lelapa.</p> <p>Barutwana ba akanya go gokaganya ga 105, 10 le 95 le mo palo nngwe le nngwe e tshwanetseng go tsena mo taekeramo ya bara.</p> <p>Dira ka se barutwana ba se neelang jaaka pele.. Rekota se se amogelwang mo patikwalelo ka dikholomo di le pedi. O tla tshwanela ke go thusa barutwana ka di le 2 tsa bofelo go kholomo nngwe le nngwe ka go dirisa setshwantsho jaaka se:</p> <p><math>105 = \square + \square</math>; <math>95 = \square - \square</math>; <math>10 = \square - \square</math></p> <p>Morutabana: Go palo ya lelapa nngwe le nngwe re kgona go dira dipolelo palo di le 4 tsa go tlhakanya le di le 4 tsa go ntsha. A re bone fa re tlogetse dingwe.</p> <p>Rekota dipolelopalo tsa 105, 10 le 95 tse di tlogetsweng.</p> <p>Thala taekeramo ya bara nngwe le nngwe ya bothata. Kwala dibara 'Kgolo', 'Nnye' le 'Nnye'. Batla bara e e tlogetsweng mme o kwale karabo mo bolokong.</p> <p style="text-align: center;"><math>101 - 98 = \square</math></p> <p style="text-align: center;"><math>\square - 99 = 4</math></p> <p style="text-align: center;"><math>\square + 2 = 201</math></p>	<p>Kwala 105, 10 le 95 mo patikwalelo.</p> <p style="text-align: center;">105      10      95</p> <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <tr> <td style="width: 80px; height: 20px;"></td> <td style="width: 40px; height: 20px;"></td> </tr> <tr> <td colspan="2" style="height: 20px;"></td> </tr> </table> <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <tr> <td style="width: 80px; text-align: center;">95</td> <td style="width: 40px; text-align: center;">10</td> </tr> <tr> <td colspan="2" style="text-align: center; height: 20px;">105</td> </tr> </table> <table border="1" style="margin: 10px auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">+ dipalelo</th> <th style="width: 50%;">- dipalelo</th> </tr> </thead> <tbody> <tr> <td><math>10 + 95 = 105</math></td> <td><math>105 - 10 = 95</math></td> </tr> <tr> <td><math>95 + 10 = 105</math></td> <td><math>105 - 95 = 10</math></td> </tr> <tr> <td><math>105 = 95 + 10</math></td> <td><math>95 = 105 - 10</math></td> </tr> <tr> <td><math>105 = 10 + 95</math></td> <td><math>10 = 105 - 95</math></td> </tr> </tbody> </table>					95	10	105		+ dipalelo	- dipalelo	$10 + 95 = 105$	$105 - 10 = 95$	$95 + 10 = 105$	$105 - 95 = 10$	$105 = 95 + 10$	$95 = 105 - 10$	$105 = 10 + 95$	$10 = 105 - 95$
95	10																		
105																			
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$10 + 95 = 105$	$105 - 10 = 95$																		
$95 + 10 = 105$	$105 - 95 = 10$																		
$105 = 95 + 10$	$95 = 105 - 10$																		
$105 = 10 + 95$	$10 = 105 - 95$																		

### **Tirwna ka nosi**

Jaanong barutwana ba tshwanetse go leka dikai tse di latelang ka go swetsa gore ke palo efe e Kgolo le gore ke efe e Nnye, ka go thala taekeramo ya bara le go rarabolola palo e e tlogetsweng.

$$115 - \square = 90 \quad \square + 3 = 210$$

Barutwana ba tshwanetse go tlhalosa dikakanyo tsa bone.

### **Tirwana ya gae: Pampiri-tiro 2**

Kwa pheletsong ya thulaganyo ya gompiono neela barutwana pampiri ya tiro 2.

O seka wa lebelela nako fa ba dira tiro e. Maikaelelo ke go fa barutwana tiro ya go ikatisa ka go kwala se ba se dirileng ka tlhaloganyo.

### **Tshegetso ya Vidio**

Go gokaganya go tlhakanya le go ntsha 7



<https://youtu.be/vIFAjz8cKMQ>



Leina:

Go gokaganya go tlhakanya le go ntsha: Pampiri ya tiro 2

1. $72 - 67 = \square$	4. $94 - 88 = \square$				
2. $4 + \square = 303$	5. $302 - 298 = \square$				
3. $\square - 63 = 6$	6. <table border="1" style="display: inline-table; vertical-align: middle;"> <tbody> <tr> <td style="width: 50px; height: 30px;"><math>\square</math></td> <td style="width: 100px; text-align: center;">98</td> </tr> <tr> <td colspan="2" style="text-align: center; height: 30px;">103</td> </tr> </tbody> </table>	$\square$	98	103	
$\square$	98				
103					
<p>7. <math>61 + 27 = 88</math>      <math>34 + 27 = 61</math>  <math>61 - 27 = \square</math></p>					
<p>8. <math>36 + 25 = 61</math>      <math>61 + 36 = 97</math>  <math>\square + 36 = 61</math></p>					
<p>Dirisa dipalo di le tharo tse di fa tlase go palelo tsa go ntsha di le pedi tse di farologaneng:</p> <p><math>78 + 52 = 130</math></p> <p>9. <math>\square - \square = \square</math></p> <p>10. <math>\square - \square = \square</math></p>					

**Kelotlhoko go morutabana**

Mo o ka kwala dintlha ka ga thutiso le se barutwana ba tlhokang thuso ka ditogamaano tse di farologaneng. O ka kwala dintlha tse dingwe tse o batlang go di rarabolola mo tshimologong ya thuto e e latelang.

**GO GOKAGANYA GO TLHAKANYA LE GO NTSHA: TSHIMOLOGO THUTO 8**

**Go ithutafatsa ga tlhaloganyo motsotso o le 1**

- a. Go tlhakanya ka bonako: dipalo tsa dijiti e le 1 le dipalo tsa didijiti di le 2  
 b. Go ntsha ka bonako: dipalo tsa dijiti e le 1 go dipalo tsa didijiti di le 2

**Tirwana ka nosi**

Mo thutong e re gokaganya go tlhakanya le go ntsha go rarabolola bothata ntle le taekeramo ya bara.

<p>Kwala dipalelo tse di bontshitsweng mo patikwalelo. Tlogela phatla ka fa tlase go palelo nngwe le nngwe go kwala gokaganyo ya palelo ya go tlhakanya le ya go ntsha.</p> <p>Barutwana ba tshwanetse go leka go akanya ka taekeramo ya bara go palelo nngwe le nngwe. Fa barutwana ba iponela mathata, o ka ba direla taekeramo ya bara ka fa tlase ga palelo.</p> <p>Dikai di neetswe ka fa tlase gore o ka dira jang dipalelo di le tharo tsa ntlha.</p>	<p><math>\square + 3 = 28</math>  <math>\square - 37 = 6</math>  <math>202 - 198 = \square</math>  <math>2 + \square = 51</math>  <math>22 - \square = 3</math></p>
<p>Morutabana: Tirwana e, e ka buisiwa jaana: Eng tlhakanya le 3 e lekana le 28? O ka fetola palelo e jang go e dira bonolo go batla palo e e tlogetsweng?</p> <p>Barutwana: <math>28 - 3</math></p> <p>Rekota palelo e mo tlase ga ya ntlhantlha/tshimologo.</p> <p>Morutabana: Ka jalo karabo ke eng?</p> <p>Barutwana: 25</p> <p>Barutwana ba ka balela kwa tlase/morago fa ba sa tlhaloganye (27, 26, 25, so; karabo ke 25).</p>	<p><math>\square + 3 = 28</math>  <math>28 - 3 = \square</math></p>
<p>Morutabana: Tirwana e, e ka buisiwa jaana: Eng ntsha 37 e lekana le 6? O ka fetola palelo e jang go e dira bonolo go batla palo e e tlogetsweng?</p> <p>Barutwana: <math>6 + 37</math> (kgotsa <math>37 + 6</math>)</p> <p>Rekota palelo e mo tlase ga ya ntlhantlha/tshimologo.</p> <p>Morutabana: Ka jalo karabo ke eng?</p> <p>Barutwana: 43</p> <p>Barutwana ba ka balela kwa godimo/pele go tswa go 37 (38, 39, 40, 41, 42, 43, ka jalo karabo ke 43). Bangwe ba kana ba kgabaganyetsa go lesome (<math>37 + 3 = 40</math> le <math>40 + 3 = 43</math>).</p>	<p><math>\square - 37 = 6</math>  <math>6 + 37 = \square</math> kgotsa <math>37 + 6 = \square</math></p>

<p>Morutabana: Tirwana e e kopa gore o rarabolole 202 ntsha 198. ? O ka fetola palelo e jang go e dira bonolo go batla karabo?</p> <p>Barutwana: <math>198 + \square = 202</math></p> <p>Rekota palelo e mo tlase ga ya ntlhantlha/tshimologo.</p> <p>Morutabana: Ka jalo karabo ke eng?</p> <p>Barutwana: 4</p> <p>Barutwana ba ka balela kwa godimo/pele go tswa go 198 (199, 200, 201, 202 ka jalo karabo ke 4). Bangwe ba ka kgabaganyetsa go lesome (<math>198 + 2 = 200</math>; <math>200 + 2 = 202</math>, ka jalo karabo ke 4).</p>	<p><math>202 - 198 = \square</math></p> <p><math>198 + \square = 202</math></p>
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### Tirwana ka nosi

Jaanong barutwana ba tshwanetse go dirisa togamaano a go fetola palelo ya go tlhakanya go ntsha le palelo ya go ntsha go tlhakanya, fa diphetogo tse di e dira bonolo go batla palo e e tlogetsweng.

$$4 + \square = 105$$

$$\square + 5 = 69$$

$$\square - 29 = 2$$

$$41 - 36 = \square$$

### Tshegetso ya Vidio

Go gokaganya go tlhakanya le go ntsha 8



<https://youtu.be/nYoOex4bibl>

Leina:

Go gokaganya go tlhakanya le go ntsha: Tlhatlhobo ya bofelo

KAROLO I

Metsotso e le 2

<p>1. <math>76 + \square = 82</math></p>	<p>Tlatsa 16, 4 le 20 go polelppalo e e ka fa tlase (11 - 14).</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding: 5px;">16</td> <td style="padding: 5px;">4</td> </tr> <tr> <td colspan="2" style="text-align: center; padding: 5px;">20</td> </tr> </table>	16	4	20			
16	4						
20							
<p>2. <math>42 - 4 = \square</math></p>	<p>11. <math>\square - 4 = \square</math></p>						
<p>3. <math>86 + 5 = \square</math></p>	<p>12. <math>\square + 4 = \square</math></p>						
<p>4. <math>17 + \square = 23</math></p>	<p>13. <math>\square - \square = 4</math></p>						
<p>5. <math>199 + \square = 201</math></p>	<p>14. <math>4 + \square = \square</math></p>						
<p>Tlatsa dipalo di le tharo tse mo mabokosong: <math>11 - 9 = 2</math>.</p> <table border="1" style="width: 100%; height: 100%;"> <tr> <td style="width: 33%; height: 50px; vertical-align: middle; text-align: center;"><math>\square</math></td> <td style="width: 33%; height: 50px; vertical-align: middle; text-align: center;"><math>\square</math></td> <td style="width: 33%; height: 50px; vertical-align: middle; text-align: center;"><math>\square</math></td> </tr> <tr> <td style="width: 33%; height: 50px; vertical-align: middle; text-align: center;"><math>\square</math></td> <td style="width: 33%; height: 50px; vertical-align: middle; text-align: center;"><math>\square</math></td> <td style="width: 33%; height: 50px; vertical-align: middle; text-align: center;"><math>\square</math></td> </tr> </table>	$\square$	$\square$	$\square$	$\square$	$\square$	$\square$	<p>15. <math>99 + \square = 102</math></p>
$\square$	$\square$	$\square$					
$\square$	$\square$	$\square$					
<p>6. <math>\square</math></p>	<p>16. <math>21 - \square = 19</math></p>						
<p>7. <math>\square</math></p>	<p>17. <math>37 + 6 = \square</math></p>						
<p>8. <math>302 - 5 = \square</math></p>	<p>18. <math>27 + \square = 35</math></p>						
<p>9. <math>29 + \square = 34</math></p>	<p>19. <math>34 - \square = 29</math></p>						
<p>10. <math>91 - \square = 89</math></p>	<p>20. <math>75 + \square = 82</math></p>						
<p>Maduo otlhe go tswa go 20</p>							

Go gokaganya go tlhakanya le go ntsha: Tlhatlhobo ya bofelo					
KAROLO 2	Metsotso e le 3				
1.	$73 - 68 = \square$				
2.	$6 + \square = 303$				
3.	$\square - 82 = 5$				
4.	$82 - 75 = \square$				
5.	$201 - 199 = \square$				
6.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; text-align: center;"><math>\square</math></td> <td style="width: 80%; text-align: center;">99</td> </tr> <tr> <td colspan="2" style="text-align: center;">102</td> </tr> </table>	$\square$	99	102	
$\square$	99				
102					
	$42 + 15 = 57$ $27 + 15 = 42$				
7.	$42 - 15 = \square$				
	$42 + 24 = 66$ $24 + 18 = 42$				
8.	$\square + 24 = 42$				
Dirisa dipalo di le tharo ka fa tlase go palelo tsa go ntsha di le pedi tse di farologaneng:					
$67 + 53 = 120$					
9.	$\square - \square = \square$				
10.	$\square - \square = \square$				
Maduo otlhe go tswa go 10					

<b>Go kgabaganyetsa go lesome: Memorantamo</b>			
<b>Tlhatlhobo-pele</b>	<b>Pampiri ya tiro 1</b>	<b>Pampiri ya tiro 2</b>	<b>Tlhatlhobo ya bofelo</b>
KAROLO 1	1. 10	1. 53	KAROLO 1
1. 10	2. 10	2. 48	1. 10
2. 10	3. 3	3. 8	2. 10
3. 3	4. 7	4. 8	3. 3
4. 2	5. 9	5. 1	4. 2
5. 8	6. 10	6. 3	5. 8
6. 10	7. 5	7. 29	6. 10
7. 5	8. 2	8. 7	7. 5
8. 6	9. 10	9. 3; 44	8. 7
9. 10	10. 6	10. 53; 5	9. 10
10. 0	11. 2		10. 0
11. 56	12. 5		11. 57
12. 63	13. 56		12. 63
13. 33	14. 54		13. 33
14. 48	15. 22		14. 48
15. 50	16. 1		15. 50
16. 127	17. 26		16. 127
17. 30	18. 44		17. 30
18. 43	19. 56		18. 42
19. 3	20. 53		19. 3
20. 7	21. 40		20. 7
KAROLO 2	22. 20		KAROLO 2
1. 64	23. 6		1. 74
2. 79	24. 33		2. 78
3. 86			3. 86
4. 6			4. 6
5. 75			5. 75
6. 2			6. 2
7. 6			7. 6
8. 54			8. 54
9. 8			9. 8
10. 38			10. 38

<b>Ditogamaano tsa go tlola: Memorantamo</b>			
<b>Tlhatlhobo-pele</b>	<b>Pampiri ya tiro 1</b>	<b>Pampiri ya tiro 2</b>	<b>Tlhatlhobo ya bofelo</b>
KAROLO 1	1. 65	1. 76	KAROLO 1
1. 54	2. 33	2. 53	1. 52
2. 39	3. 47	3. 39	2. 39
3. 36	4. 3	4. 53	3. 36
4. 47	5. 60	5. 24	4. 47
5. 17	6. 16	6. 15	5. 17
6. 53	7. 32	7. 20	6. 53
7. 44	8. 59	8. 30	7. 44
8. 4	9. 86	9. 20	8. 3
9. 31	10. 40	10. 29	9. 31
10. 11	11. 64		10. 11
11. 60	12. 46		11. 50
12. 48	13. 46		12. 48
13. 54	14. 60		13. 54
14. 46	15. 53		14. 46
15. 40	16. 63		15. 40
16. 39	17. 54		16. 39
17. 20	18. 75		17. 20
18. 89	19. 30		18. 84
19. 40	20. 37		19. 40
20. 46			20. 46
KAROLO 2			KAROLO 2
1. 59			1. 69
2. 60			2. 60
3. 30			3. 30
4. 20			4. 20
5. 83			5. 83
6. 59			6. 59
7. 22			7. 22
8. 15			8. 15
9. 30			9. 30
10. 25			10. 25



<b>Koketsopedi le go kgaoganya magareng: Memorantamo</b>				
<b>Tlhatlhobo-pele</b>	<b>Thuto Tshimologo 1</b>	<b>Pampiri ya tiro 1</b>	<b>Pampiri ya tiro 2</b>	<b>Tlhatlhobo ya bofelo</b>
KAROLO 1	1. Koketsopedi ya 4 ke 8	1. 12	1. 64	KAROLO 1
1. 12	Ditlhopha di le pedi tsa	2. 6	2. 52	1. 14
2. 6	ga 4 ke 8	3. 18	3. 21	2. 7
3. 18	Pedi atisa 4 ke 8	4. 14	4. 55	3. 18
4. 16	$4 \times 2 = 8$	5. 8	5. 46	4. 16
5. 6		6. 9	6. 18	5. 7
6. 8	2. Halofo ya 8 ke 4	7. 20	7. 62	6. 8
7. 20	8 arola ka 2 ke 4	8. 3	8. 31	7. 20
8. 7	8 e kgaogantswe	9. 6	9. 63	8. 6
9. 5	magareng ga 2 ke 4	10. 7	10. 2	9. 5
10. 9	$8 \div 2 = 4$	11. 16	11. 88	10. 9
11. 30		12. 22	12. 76	11. 28
12. 14	3. Koketsopedi ya 9 ke	13. 16	13. 43	12. 14
13. 14	18	14. 60	14. 52	13. 14
14. 200	Ditlhopha di le pedi tsa	15. 100	15. 78	14. 200
15. 40	ga 9 ke 18	16. 7	16. 24	15. 40
16. 80	Pedi atisa 9 ke 18	17. 20	17. 98	16. 80
17. 25	$9 \times 2 = 18$	18. 5	18. 49	17. 25
18. 8		19. 35	19. 97	18. 9
19. 15	4. Halofo ya 20 ke 10	20. 140	20. 2	19. 15
20. 120	20 arola ka 2 ke 10			20. 120
KAROLO 2	20 e kgaogantswe			KAROLO 2
1. 84	magareng ga 2 ke 10			1. 84
2. 72	$20 \div 2 = 10$			2. 72
3. 32				3. 32
4. 51	5. Tlhopho ya			4. 51
5. 94	morutwana			5. 94
6. 19				6. 19
7. 104	6. Tlhopho ya			7. 104
8. 39	morutwana			8. 39
9. 77				9. 77
10. 2				10. 2

Go atametsa le go baakanya: Memorantamo			
Tlhatlhobo-pele	Pampiri ya tiro 1	Pampiri ya tiro 2	Tlhatlhobo ya bofelo
KAROLO 1	1. 86	1. 85	KAROLO 1
1. 53	2. 47	2. 16	1. 54
2. 39	3. 29	3. 82	2. 39
3. 47	4. 69	4. 226	3. 47
4. 49	5. 97	5. 144	4. 49
5. 117	6. 40	6. 9	5. 148
6. 83	7. 2	7. 2	6. 83
7. 30	8. 1	8. 30	7. 30
8. 3	9. 400	9. 40	8. 3
9. 3	10. Molapalo wa	10. 80 – 40 + 1	9. 3
10. 2	ntlha		10. 2
11. 71	11. 18		11. 31
12. 78	12. 31		12. 78
13. 41	13. 56		13. 41
14. 175	14. 165		14. 175
15. 37	15. 40		15. 37
16. 50	16. 20		16. 50
17. 1	17. 2		17. 1
18. 100	18. 1		18. 100
19. 200	19. 3		19. 200
20. 2	20. molapalo wa		20. 2
KAROLO 2	bobedi		KAROLO 2
1. 63			1. 53
2. 45			2. 25
3. 125			3. 125
4. 135			4. 135
5. 294			5. 294
6. 9			6. 9
7. 2			7. 2
8. 30			8. 30
9. 40			9. 40
10. 80 – 60 + 1			10. 60 – 30 + 1

<b>Go rulaganya sešwa: Memorantamo</b>			
<b>Tlhatlhobo-pele</b>	<b>Pampiri ya tiro 1</b>	<b>Pampiri ya tiro 2</b>	<b>Tlhatlhobo ya bofelo</b>
KAROLO 1	1. 8 le 2	1. 102	KAROLO 1
1. 7 le 3	2. 4 le 6	2. 57	1. 7 le 3
2. 4 le 6	3. 2	3. 300	2. 4 le 6
3. 4	4. 20	4. 83	3. 3
4. 20	5. 36 le 64	5. 196	4. 20
5. 30 le 70	6. 45 le 55	6. 90	5. 30 le 70
6. 51 le 49	7. 12	7. 3	6. 51 le 49
7. 12	8. 14	8. 9	7. 12
8. 17	9. 6	9. 37	8. 17
9. 9	10. 38	10. 4	9. 9
10. 86	11. 157	11. 74 le 26	10. 86
11. 114	12. 12	12. 2 le 5	11.132
12. 10	13. 9 le 21		12. 10
13. 8 le 12	14. 17 le 13		13. 8 le 12
14. 4 le 16	15. 120		14. 4 le 16
15. 100	16. 8		15. 100
16. 9	17. 14 le 6		16. 9
17. 18 le 12	18. 12 le 8		17. 18 le 12
18. 14 le 16	19. 13		18. 14 le 16
19. 31	20. 40		19. 31
20. 40			20. 40
KAROLO 2			KAROLO 2
1. 104			1. 105
2. 78			2. 98
3. 300			3. 300
4. 106			4. 106
5. 178			5. 178
6. 70			6. 70
7. 6			7. 8
8. 58			8. 58
9. 3			9. 3
10. 88 le 12			10. 36 le 14

Go gokaganya go tlhakanya le go ntsha: Memorantamo			
Tlhatlhobo- pele	Pampiri ya tiro 1	Pampiri ya tiro 2	Tlhatlhobo ya bofelo
1. 4	1. 5	1. 5	1. 6
2. 38	2. 48	2. 299	2. 38
3. 91	3. 85	3. 69	3. 91
4. 6	4. 8	4. 6	4. 6
5. 2	5. 3	5. 4	5. 2
6. 2 le 9	6. 5 le 8 (rulaganya ka nepagalo) le 13 mo bolokong e e tlase	6. 5	6. 2 le 9
7. 11		7. 34	7. 11
8. 297		8. 25	8. 297
9. 5	7. 198	9. $130 - 52 = 78^*$	9. 5
10. 2	8. 6	10. $130 - 78 = 52^*$	10. 2
11. $20 - 5 = 15$	9. 3	*dikarabo di ka kgothatsana (interchanged).	11. $20 - 4 = 16$
12. $15 + 5 = 20$	10. 5		12. $16 + 4 = 20$
13. $20 - 15 = 5$	11. $20 - 3 = 17$		13. $20 - 16 = 4$
14. $5 + 15 = 20$	12. $17 + 3 = 20$		14. $4 + 16 = 20$
15. 3	13. $20 - 17 = 3$		15. 3
16. 2	14. $3 + 17 = 20$		16. 2
17. 43	15. 4		17. 43
18. 8	16. 3		18. 8
19. 5	17. 54		19. 5
20. 7	18. 8		20. 7
KAROLO 2	19. 5		KAROLO 2
1. 4	20. 7		1. 5
2. 398			2. 297
3. 87			3. 87
4. 7			4. 7
5. 2			5. 2
6. 3			6. 3
7. 27			7. 27
8. 18			8. 18
9. $120 - 37 = 83^*$			9. $120 - 53 = 67^*$
10. $120 - 83 = 37^*$			10. $120 - 67 = 53^*$
* dikarabo di ka kgothatsana (interchanged).			* dikarabo di ka kgothatsana (interchanged).

**Go gokaganya go tlhakanya le go ntsha Tshimologo Thuto 1: Tirwana ka nosi**

$3 + 6 = 9 \checkmark$	$6 - 3 = 9 \times$
$9 = 6 + 3 \checkmark$	$9 - 3 = 6 \checkmark$
$6 + 9 = 3 \times$	$3 = 9 - 6 \checkmark$
$6 + 3 = 9 \checkmark$	$9 - 6 = 3 \checkmark$
$3 + 9 = 6 \times$	$3 - 6 = 9 \times$

**Go gokaganya go tlhakanya le go ntsha Tshimologo Thuto 3: Tirwana ka nosi**

Kwala dipalo tsa ba lelapa tse di latelang go taekeramo ya bara e e nepagetseng ka fat lase. O kwale dipolelopalalo tsa go tlhakanya le go ntsha go palo ya lelapa nngwe le nngwe.

$$5 + 5 = 10 \quad 3 + 4 = 7 \quad 11 + 1 = 12 \quad 2 + 7 = 9$$

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9																			
11	1																		
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3	4																		
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5	5																		
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Tlhakanya:	Tlhakanya:	Tlhakanya:	Tlhakanya:																
$2 + 7 = 9$	$11 + 1 = 12$	$3 + 4 = 7$	$5 + 5 = 10$																
$7 + 2 = 9$	$1 + 11 = 12$	$4 + 3 = 7$	$10 = 5 + 5$																
$9 = 2 + 7$	$12 = 1 + 11$	$7 = 3 + 4$	Ntsha:																
$9 = 7 + 2$	$12 = 11 + 1$	$7 = 4 + 3$	$10 - 5 = 5$																
Ntsha:	Ntsha :	Ntsha:	$5 = 10 - 5$																
$9 - 2 = 7$	$12 - 1 = 11$	$7 - 4 = 3$																	
$9 - 7 = 2$	$12 - 11 = 1$	$7 - 3 = 4$																	
$7 = 9 - 2$	$11 = 12 - 1$	$4 = 7 - 3$																	
$2 = 9 - 7$	$1 = 12 - 11$	$3 = 7 - 4$																	

