Mrs Angie Motshekga,
Minister of Basic Education

Mr Enver Surty,
Deputy Minister
of Basic Education

These workbooks have been developed for the children of South Africa under the leadership of the Minister of Basic Education, Mrs Angie Motshekga, and the Deputy Minister of Basic Education, Mr Enver Surty.

The Rainbow Workbooks form part of the Department of Basic Education's range of interventions aimed at improving the performance of South African learners in the first six grades. As one of the priorities of the Government's Plan of Action, this project has been made possible by the generous funding of the National Treasury. This has enabled the Department to make these workbooks, in all the official languages, available at no cost.

We hope that teachers will find these workbooks useful in their everyday teaching and in ensuring that their learners cover the curriculum. We have taken care to guide the teacher through each of the activities by the inclusion of icons that indicate what it is that the learner should do.

We sincerely hope that children will enjoy working through the book as they grow and learn, and that you, the teacher, will share their pleasure.

We wish you and your learners every success in using these workbooks.

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Rainbow WORKBOOKS

MATHEMATICS IN ENGLISH
GRADE 4 – BOOK 1
TERMS 1 & 2
ISBN 978-1-4315-0015-4

THIS BOOK MAY NOT BE SOLD.

1 2 3 4

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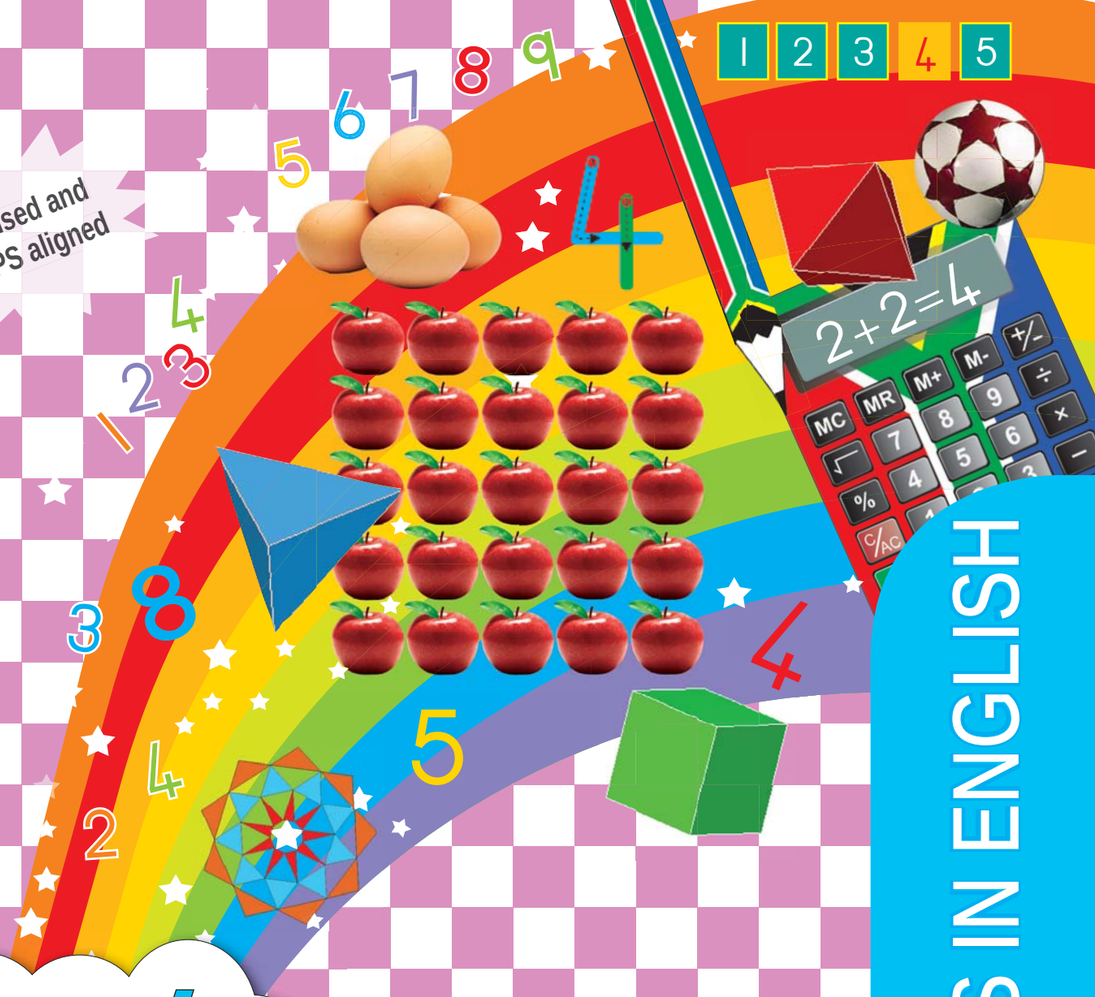
ISBN 978-1-4315-0015-4

Revised and CAPS aligned



MATHEMATICS IN ENGLISH

Grade 4

Name:

Class:

basic education
Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

Book 1
Terms 1 & 2

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1	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39

Rainbow WORKBOOKS

Grade 4

Mathematics

Book 1

1 Revision worksheets: R1 to R16
Key concepts from Grade 3

2 Worksheets: 1 to 64

Book 2

3 Worksheets: 65 to 144

ENGLISH

Name:

The structure of a worksheet

Worksheet number
(Revision R1 to R16,
Ordinary 1 to 144)

Worksheet title

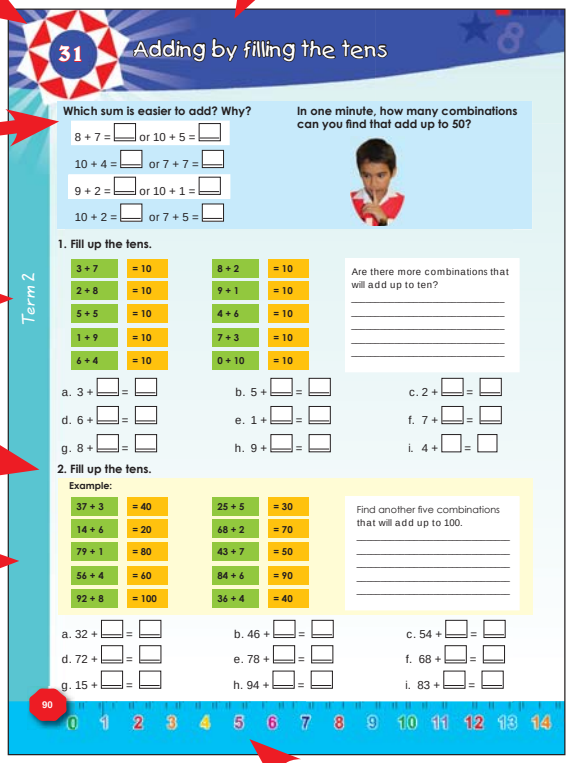
Topic introduction
(Text and pictures to help you think about and discuss the topic of the worksheet.)

Term indicator
(There are forty worksheets per term.)

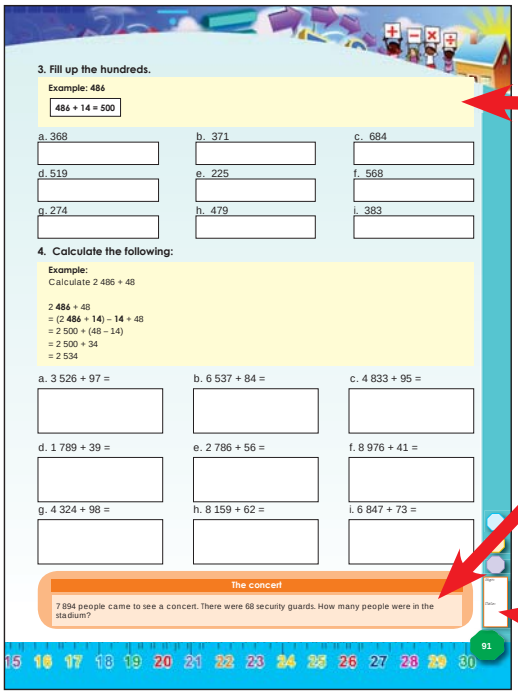
Questions

Colour code for content area

Content	Side bar colour
Revision	Purple
Number	Turquoise
Patterns and functions (algebra)	Electric blue
Space and shape (geometry)	Orange
Measurement	Green
Data handling	Red



Language colour code:
Afrikaans (Red), English (Blue)



Example frame (in yellow)

Fun/challenge/problem solving activity
(This is an end of worksheet activity that may include fun or challenging activities that can also be shared with parents or brothers and sisters at home.)

Teacher assessment rating, signature and date

Rainbow WORKBOOKS

Grade 4

Mathematics

PART 1

Revision

Key concepts from Grade 3

WORKSHEETS R1 TO R16

ENGLISH Book 1

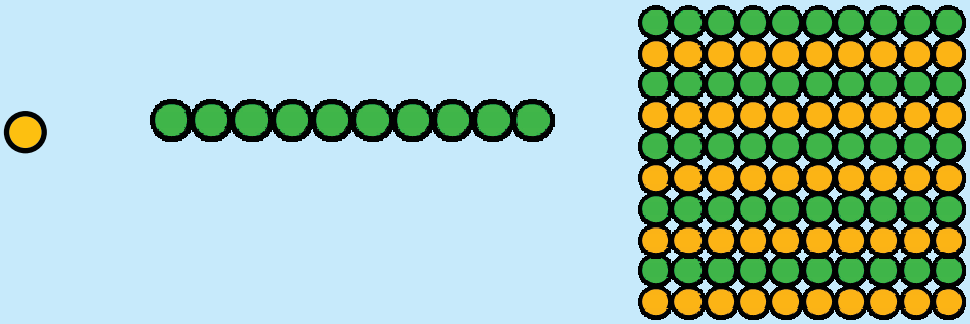
Name:

R1a Base Ten Counting

Revision

The first 16 worksheets are revision activities. They also summarise important concepts you need in Grade 4.

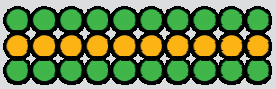
How many beads are there? See how fast can you count them.

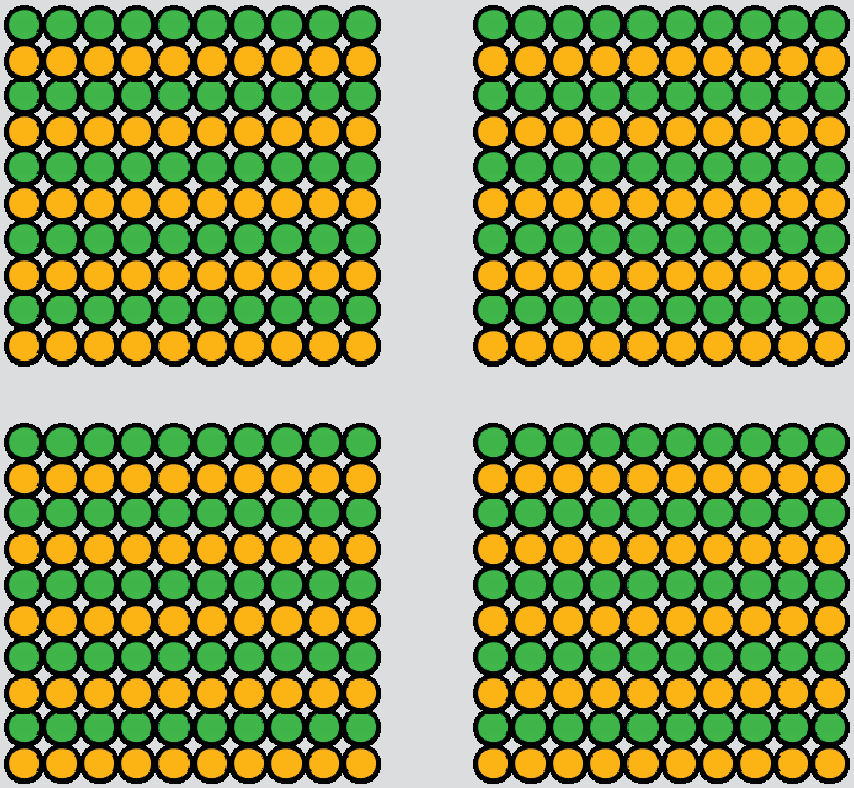


I wonder what is the fastest way to count? Can you help me?

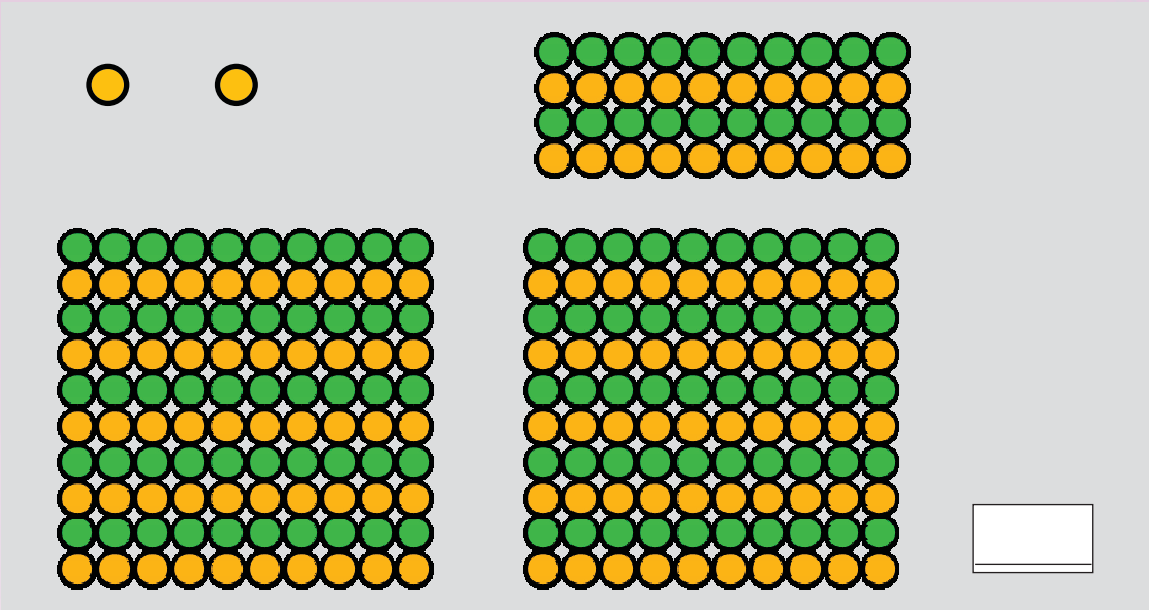
1. Write down how many beads you counted?

a. _____

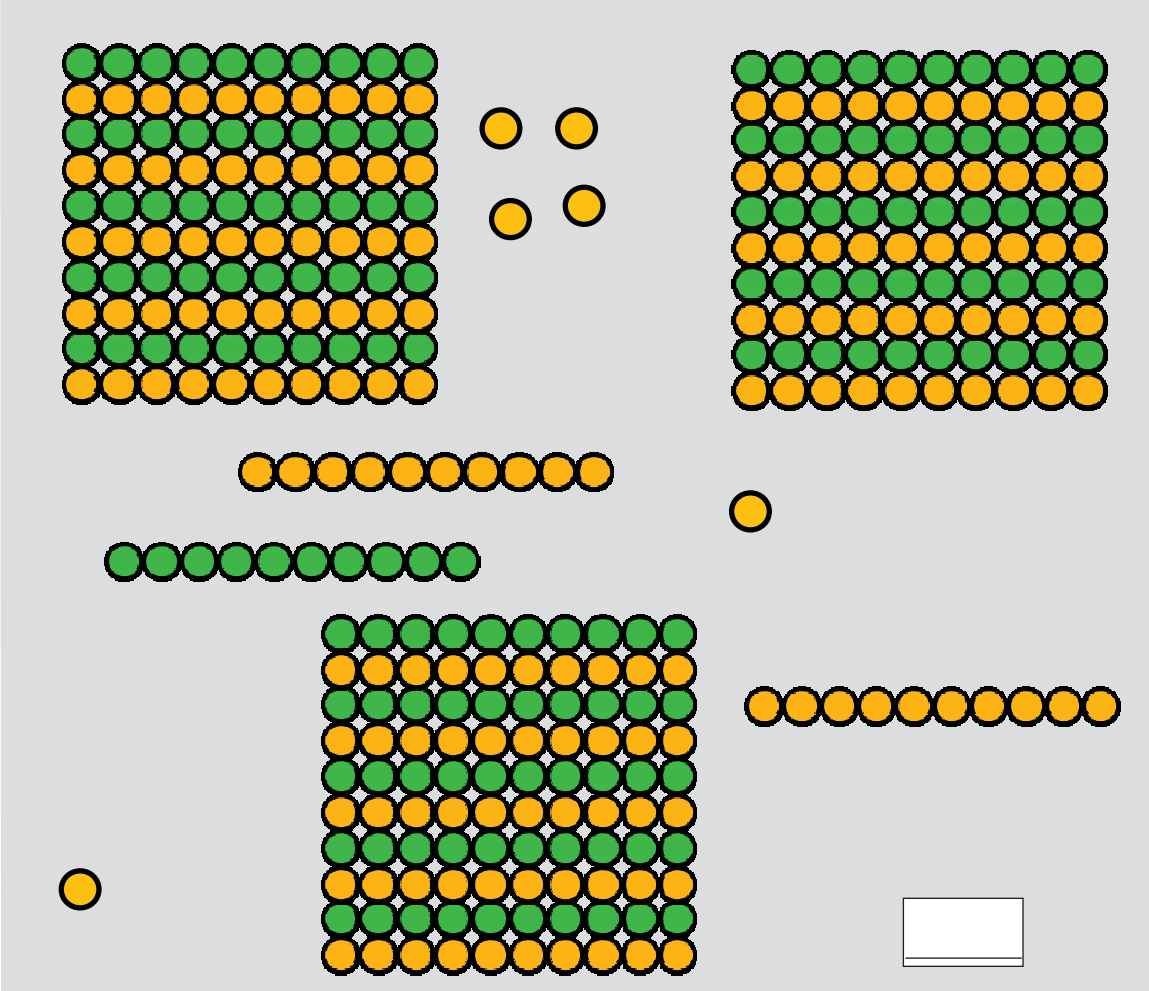
b.  _____

c.  _____

d.



e.



Sign:

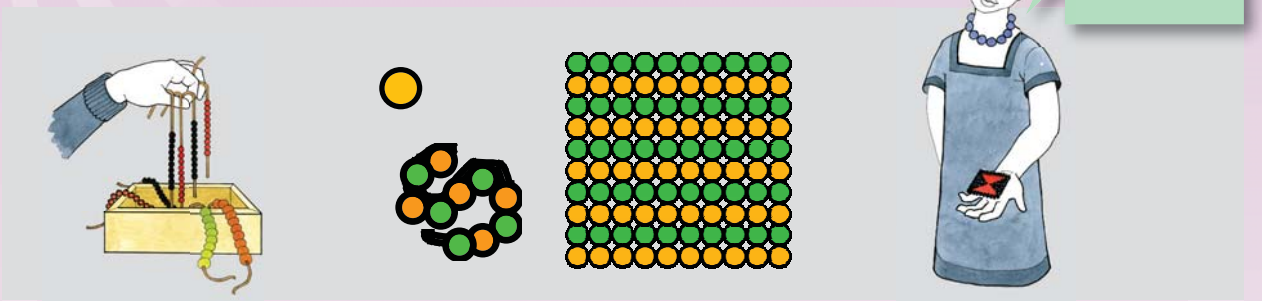
Date:

continued ☛

Base Ten Counting continued

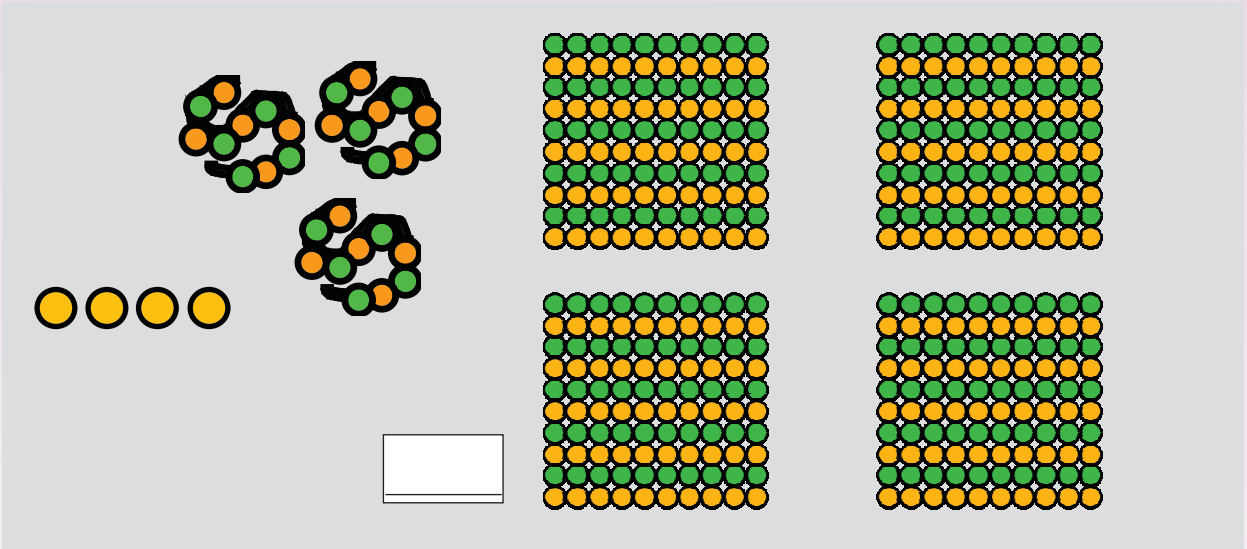
2. Write down how many beads there are.

a.

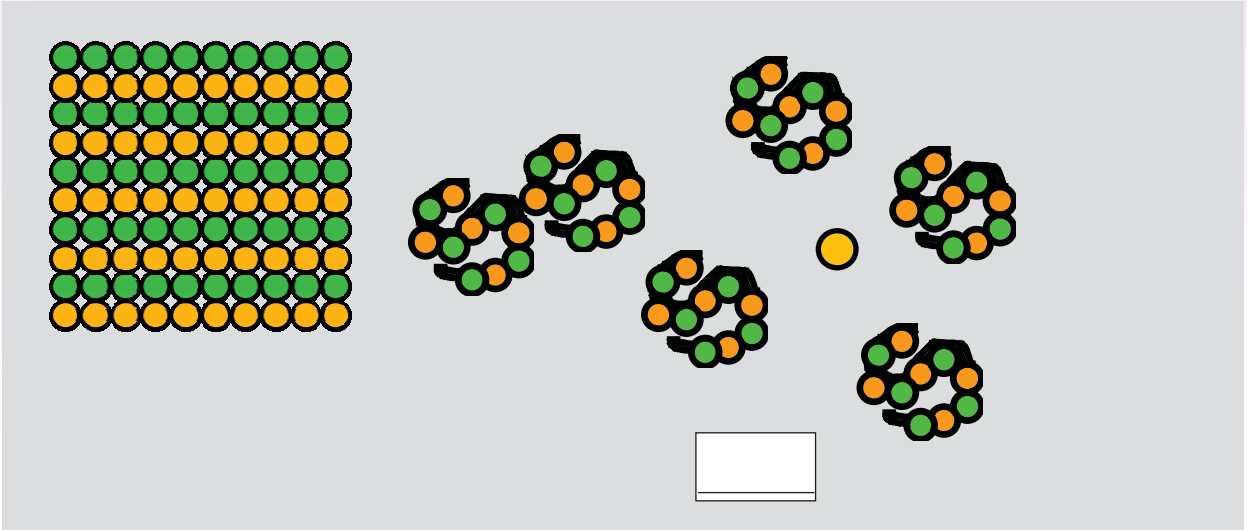


These blocks of beads have the same number in each as the block above. Write down the total number of beads.

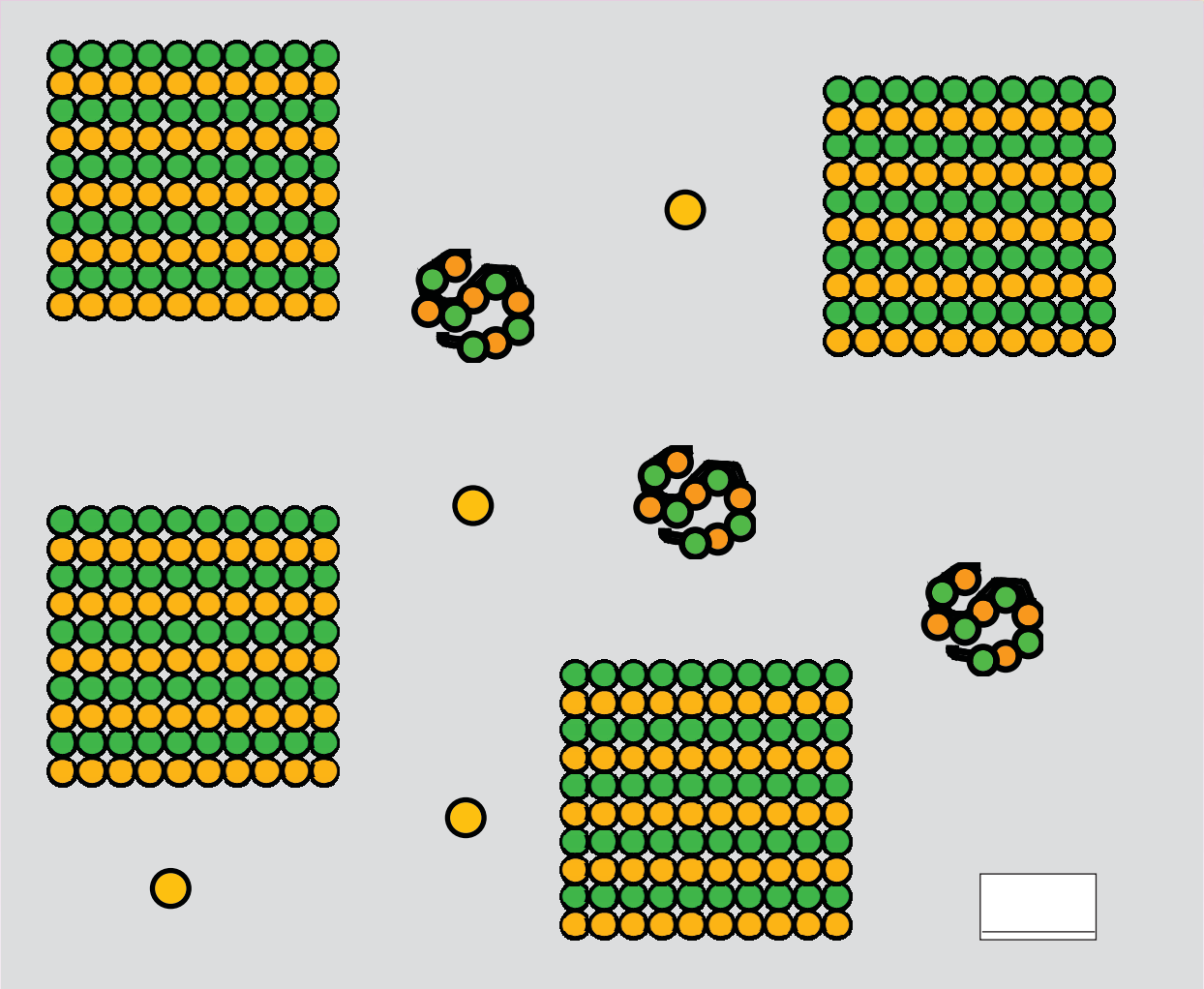
b.



c.

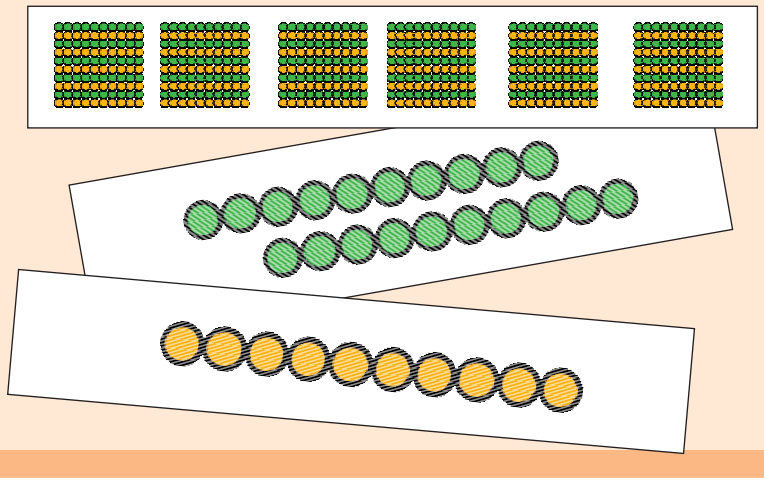


d.



How quick are you?

What you need:
- Cut-out 1.



What to do:
- Play in pairs.
- Cut out the cards from Cut-out sheet 1 at the back of the book.
- Place them face down on your desk.
- You choose five cards and your partner chooses five.
- See who is first to give the total number of beads on the cards.
- Check your partner's answer.
- Do the same with 6/7/8/9/ and 10 cards.
- The person with the most correct answers is the winner.

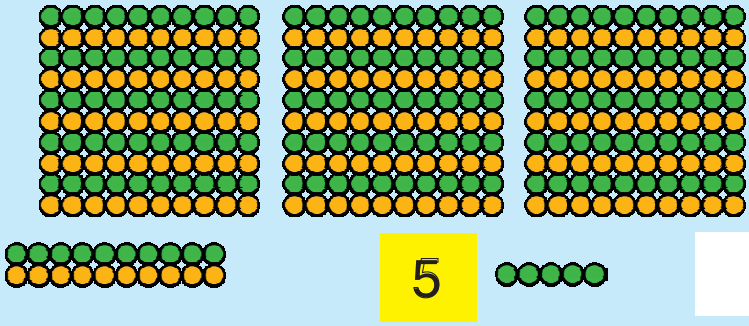
Sign:

Date:

Numbers 0 to 1 000

What number will these cards make?

300 20 5



325

In words it is

Three hundred and twenty-five

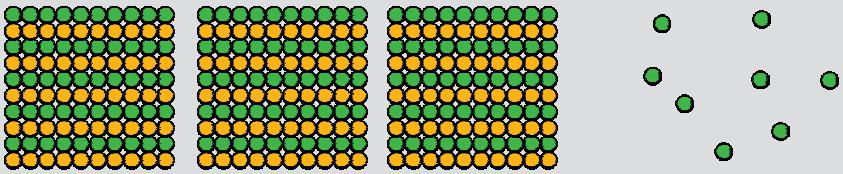
1. Match column A with column B.

Column A | Column B

a.

300

8

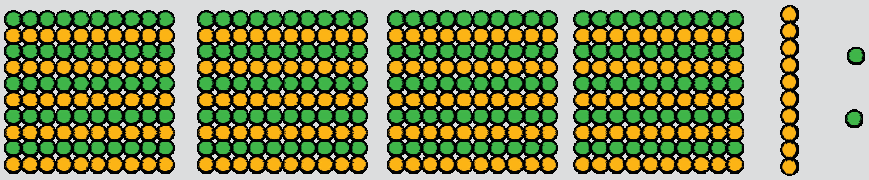


b.

100

40

3

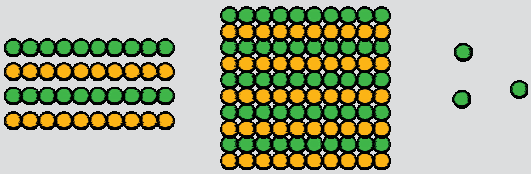


c.

400

10

2



2. Write the number in the correct column:

	Number cards	Hundreds	Tens	Units
a.	200 50 3	2	5	3
b.	400 60 5			
c.	100 20 10 9			
d.	9 300 10			
e.	40 2 3 400			

3. Complete the following. We have done the first one to guide you.

a. 723 = 7 hundreds + 2 tens + 3 units

b. 648 = _____

c. 521 = _____

d. 704 = _____

e. 230 = _____

4. The first one is done for you. Write the other numbers also in expanded notation.

a. 654 = 600 + 50 + 4

b. 203 = _____

c. 745 = _____

d. 650 = _____

e. 605 = _____

f. 475 = _____

5. Write the following in words.

a. 54 _____

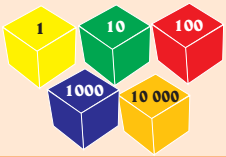
b. 308 _____

c. 847 _____

What is the size of your number:

Remember zero is a place holder.

What you need:
- Cut-out 2
- Cut-out 3: Cut and fold the dice (units to hundreds)



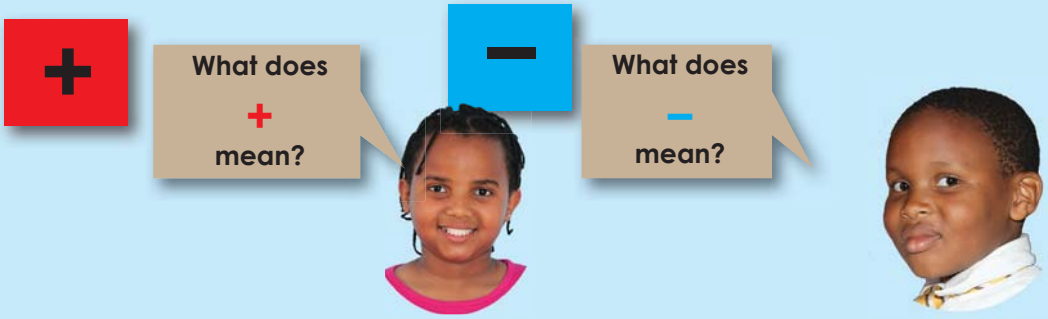
What to do:
- Play in pairs.
- Each player roles a hundreds dice (red, blue or orange dice), a tens (green dice) and a units (yellow dice) dice.
- Each player makes his or her own 3-digit number with the number cards.
- The winner is the player with the greatest number.
- Do the same activity five times.

Sign:

Date:

Addition and Subtraction to 999

What do addition and subtraction mean?



1. Complete the pattern:

a. + 100, + 100, + 100

200	300	400			

b. – 20, – 20, – 20

200	180	160			

c. + 50, + 50, + 50

50	100	150			

d. + 30, + 30, + 30

60	90	120			

e. – 40, – 40, – 40

500	460	420			

Examples :

Example 1: 612 + 56

612	+	56

600	10	2	50	6

612 + 56
= 600 + 10 + 50 + 2 + 6
= 600 + 60 + 8
= 668

Example 2: 389 + 74

389	+	74

300	80	9	70	4

389 + 74
= 300 + 80 + 70 + 9 + 4
= 300 + 150 + 13
= 300 + 100 + 50 + 10 + 3
= 400 + 60 + 3
= 463

2. Add the following using the given example.

a. 124 + 35

124	+	35

124 + 35

= 100 + 20 + 30 + 4 + 5

= _____

= _____

b. 678 + 25

678	+	25

678 + 25

= 600 + 70 + 20 + 8 + 5

= _____

= _____

= _____

Examples:

Example 1: 356 - 3

356	–	3

356 - 3

= 300 + 50 + (6 – 3)

= 300 + 50 + 3

= 353

Example 2: 241 - 6

241	–	6

241 - 6

= 200 + 40 + (1 – 6)

= 200 + 30 + (11 – 6)

= 200 + 30 + 5

= 235

3. Subtract the following using the given example.

a. 659 – 5

659	–	5

659 – 5

= 600 + 50 + (9 – 5)

= _____

= _____

b. 392 – 8

392	–	8

392 – 8

= 300 + 90 + (2 – 8)

= _____

= _____

= _____

Sign:

Date:

More Addition and Subtraction to 999

How fast can you add the following?

100 2 10 2 10 100 2 10 2

20 300 2 100 30 2 2 20 200 2 2 2 10

Examples:

Example 1:

212 + 456

200 10 2 + 400 50 6

= 200 + 400 + 10 + 50 + 2 + 6

= 600 + 60 + 8

= 668

Example 2:

124 + 387

100 20 4 + 300 80 7

= 100 + 300 + 20 + 80 + 4 + 7

= 400 + 100 + 11

= 500 + 10 + 1

= 511

1. Add the following using the examples above.

a. 234 + 362

[ ] [ ] [ ] + [ ] [ ] [ ]

= 200 + 300 + 30 + 60 + 4 + 2

= _____

= _____

b. 644 + 213

[ ] [ ] [ ] + [ ] [ ] [ ]

= _____

= _____

= _____

c. 396 + 145

[ ] [ ] [ ] + [ ] [ ] [ ]

= 300 + 100 + 90 + 40 + 6 + 5

= _____

= _____

= _____

= _____

d. 247 + 356

[ ] [ ] [ ] + [ ] [ ] [ ]

= _____

= _____

= _____

= _____

= _____

Examples:

Example 1:

784 – 323

700	80	4	–	300	20	3

= (700 – 300) + (80 – 20) + (4 – 3)

= 400 + 60 + 1

= 461

Example 2:

546 – 288

500	40	6	–	200	80	8

= (500 – 200) + (40 – 80) + (6 – 8)

= 300 + (30 – 80) + (16 – 8)

= 200 + (130 – 80) + (16 – 8)

= 200 + 50 + 8

= 258

2. Subtract the following using the given example.

a. 486 – 214

			–			

= (400 – 200) + (80 – 10) + (6 – 4)

= _____

= _____

b. 698 – 453

			–			

= _____

= _____

= _____

c. 384 – 267

			–			

= (300 – 200) + (80 – 60) + (4 – 7)

= _____

= _____

= _____

= _____

d. 413 – 168

			–			

= _____

= _____

= _____

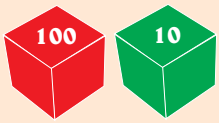
= _____

= _____

+ What is the size of your number:

What you need:

- Use the 10s and100s dice made in the previous activity.
- Piece of paper.



What to do:

- Roll the tens (green) dice.
- Add the number landed on to the first number on the blue card. Write your addition sum on a piece of paper.
- Do the same with the next four numbers on the blue card.
- Repeat the activity using both the 10s and 100s dice.
- Learners check each other's addition sums.
- The winner is the person with the most correct answers

132
423
400
675
897

–

Repeat the activity using subtraction.

Sign:

Date:

R5 Multiplication

We have six beads repeated four times.

This is the same as

6 + 6 + 6 + 6 which is the same as:

6 x 4

1. Complete the patterns:

a. 2, 4, 6, ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____

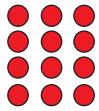
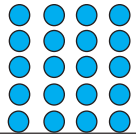
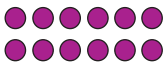
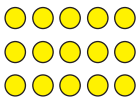
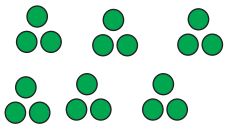
b. 3, 6, 9, ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____

c. 5, 10, 15, ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____

d. 4, 8, 12, ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____

e. 10 , 20 , 30 , ____ , ____ , ____ , ____ , ____ , ____ , ____ , ____

2. Complete the table:

Diagram	Addition sum	Words	Multiplication sum
	4 + 4 + 4 = 12		
		Four groups of five	
			
			3 x 5 = 15
			

3. Match the cats with the mice.

a. 9 7 x 3

b. 24 3 x 3

c. 21 6 x 4

d. 32 5 x 2

e. 10 8 x 4

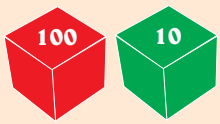
4. Fill in the x and = in the right places.

a. 6 ☐ 3 ☐ 18	b. 16 ☐ 4 ☐ 4	c. 28 ☐ 7 ☐ 4
d. 6 ☐ 6 ☐ 36	e. 12 ☐ 3 ☐ 4	f. 7 ☐ 7 ☐ 49
g. 18 ☐ 2 ☐ 9	h. 4 ☐ 12 ☐ 48	i. 54 ☐ 9 ☐ 6
j. 12 ☐ 7 ☐ 84	k. 50 ☐ 5 ☐ 10	l. 27 ☐ 3 ☐ 9
m 12 ☐ 2 ☐ 24	n. 9 ☐ 9 ☐ 81	o. 60 ☐ 5 ☐ 12

X

In one minute I can ...

What you need:
- Use the units and tens dice made in the previous activity from Cut-out 3.
- Piece of paper.



What to do:
- Roll the units and tens dice. Multiply the two numbers. Write down the multiplication sum with its answer.
- Repeat doing this until your teacher says stop after a minute.
- Give your multiplication sum to your friend to mark.
- The winner is the person with the most correct answers.

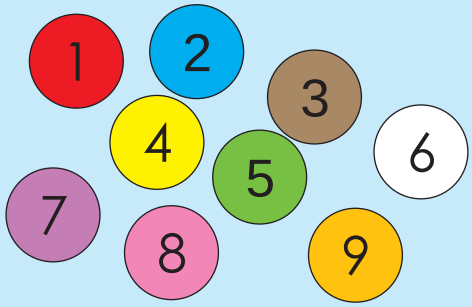
Sign:

Date:

R6 More Multiplication

See how many sums you can make by multiplying a number from the square by a number in a circle.

1	2	3
4	5	6
7	8	9



1. Complete the table.

x	1	2	3	4	5	6	7	8	9
1	1 x 1 =	1 x 2 =	1 x 3 =	1 x 4 =	1 x 5 =	1 x 6 =	1 x 7 =	1 x 8 =	1 x 9 =
2	2 x 1 =	2 x 2 =	2 x 3 =	2 x 4 =	2 x 5 =	2 x 6 =	2 x 7 =	2 x 8 =	2 x 9 =
3	3 x 1 =	3 x 2 =	3 x 3 =	3 x 4 =	3 x 5 =	3 x 6 =	3 x 7 =	3 x 8 =	3 x 9 =
4	4 x 1 =	4 x 2 =	4 x 3 =	4 x 4 =	4 x 5 =	4 x 6 =	4 x 7 =	4 x 8 =	4 x 9 =
5	5 x 1 =	5 x 2 =	5 x 3 =	5 x 4 =	5 x 5 =	5 x 6 =	5 x 7 =	5 x 8 =	5 x 9 =
6	6 x 1 =	6 x 2 =	6 x 3 =	6 x 4 =	6 x 5 =	6 x 6 =	6 x 7 =	6 x 8 =	6 x 9 =
7	7 x 1 =	7 x 2 =	7 x 3 =	7 x 4 =	7 x 5 =	7 x 6 =	7 x 7 =	7 x 8 =	7 x 9 =
8	8 x 1 =	8 x 2 =	8 x 3 =	8 x 4 =	8 x 5 =	8 x 6 =	8 x 7 =	8 x 8 =	8 x 9 =
9	9 x 1 =	9 x 2 =	9 x 3 =	9 x 4 =	9 x 5 =	9 x 6 =	9 x 7 =	9 x 8 =	9 x 9 =

2. Solve the following problems. Use the example to guide you. You will need extra sheets of paper to solve the problems.

Example:

The problem: A parent gives nine bags of soccer balls to a school. Each bag contains 6 soccer balls. How many soccer balls does the parent give away?

What is the question? How many soccer balls does the parent give away?
What are the numbers? 9 (bags) and 6 (balls per bag)
What key words tell you which basic operation (+, –, x or ÷) to use? Each bag contains.
What operation must be used? Multiplication.
Draw a picture.

Write down a number sentence. 9 x 6 = ☐
Show the calculation. 9 x 6 = 54

Answer: The parent gives 54 soccer balls away.

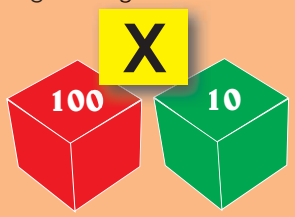
a. A farmer plants 8 rows of apple trees. There are 7 apple trees in each row. How many apples trees are there in total?

b. Ann's mother buys 5 pizzas. Each pizza is cut into four slices. How many slices are there altogether?

c. Mandla has three friends. Each of them has twenty sweets. How many sweets do they all have together?

In one minute I can ...

Play the previous game again.



Sign:

Date:

R7 Number patterns

Talk about the patterns in the table below.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1. What will the next number be?

a. 40, 45, 50, ____

b. 85, 95, 105, ____, ____, ____

c. 378, 379, 380, ____, ____, ____

d. 405, 410, 415, ____, ____, ____

e. 599, 598, 597, ____, ____, ____

f. 600, 610, 620, ____, ____, ____

g. 775, 780, 785, ____, ____, ____

h. 800, 802, 804, ____, ____, ____

2. Complete the following patterns.

a. 3 + 5 = ____ | 30 + 50 = ____ | 300 + 500 = ____

b. 4 + 2 = ____ | 40 + 20 = ____ | 400 + 200 = ____

c. 3 + 6 = ____ | 30 + 60 = ____ | 300 + 600 = ____

d. 5 + 1 = ____ | 50 + 10 = ____ | 500 + 100 = ____

e. 7 + 2 = ____ | 70 + 20 = ____ | 700 + 200 = ____

3. What will you put in the place of the orange?

a. 4 + 3 = ● + 4 | 3

b. 6 + 2 = ● + 6 |

c. 5 + 4 = ● + 5 |

d. ● + 3 = 3 + 5 |

e. 2 + ● = 7 + 2 |

f. 8 + 1 = 1 + ● |

g. 6 + ● = 3 + 6 |

h. 9 + 0 = ● + 9 |

i. 7 + ● = 1 + 7 |

j. ● + 6 = 6 + 1 |

Pattern fun

How fast can you get the answer?

2	6	11	15
4	12	22	30
6	18	33	45

Coloured cards...

Look at the cards. What do you notice?

4 + 3 | 5 + 6 | 4 + 5 | 2 + 7 | 3 + 4 | 3 + 9

8 + 1 | 7 + 2 | 9 + 3 | 5 + 4 | 6 + 5 | 1 + 8

Sign:

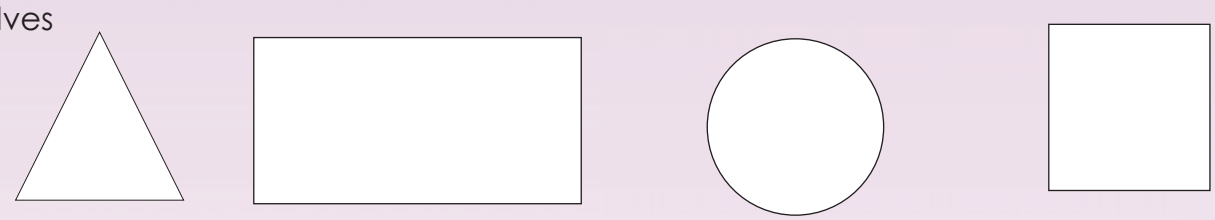
Date:

R8 Fractions

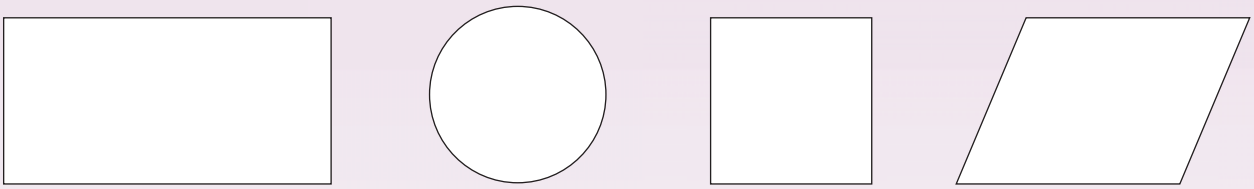
Use fractions to describe the pictures.

1. Divide these shapes into:

Halves



Quarters



2. Colour in the following fractions.

a. two quarters ($\frac{2}{4}$) =

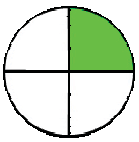
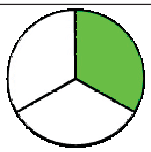
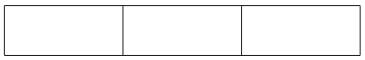
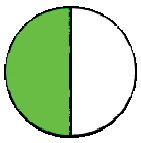
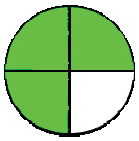
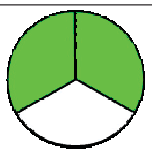
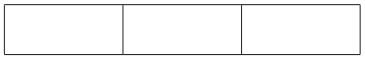
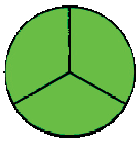
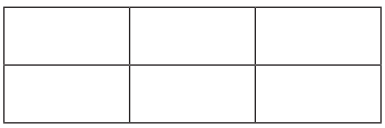
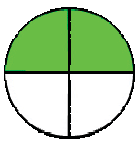
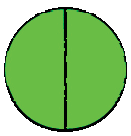
b. one quarter ($\frac{1}{4}$) =

c. two thirds ($\frac{2}{3}$) =

d. two halves ($\frac{2}{2}$) =

e. three thirds ($\frac{3}{3}$)=

3. Complete the table below.

Fraction circle	Fraction that is green.	Colour the same fraction on this diagram.
a. 	one quarter ($\frac{1}{4}$)	one quarter ($\frac{1}{4}$) is green
b. 		
c. 		
d. 		
e. 		
f. 		
g. 		
h. 		

Fractions dice and strips

Throw a dice.

Then take a fraction strip from Cut-out 4 that matches the fraction on the face of the dice.

If the face is $\frac{1}{4}$, take a quarter strip. If you are correct keep the fraction strip.

At the end count your fraction strips.

The winner is the person with the most fractions strips.

Sign:

Date:

R9 More Fractions

Use fractions to describe the pictures.

= one quarter

= one quarter

= one quarter

= one quarter

1. Share the sweets. What fraction will each child get?

Children	Total number of sweets	What fraction will each child get?	How many sweets will each child get?

2. You divide 16 sweets between four children. What fraction will each child get?

Continue on an extra sheet of paper

3. You divide 18 sweets between two children. What fraction will each get?

Continue on an extra sheet of paper

4. Four children each get $\frac{1}{4}$ of 28 sweets. How many sweets does each child get?

Continue on an extra sheet of paper

Sign:

Date:

Fractions dice and strips

Play this game again. See the previous lesson.

Identify all the coins and notes:

1. Tick the coins that are equal to the amount shown:

a. R5,40

b. R3,20

c. R7,50

d. R9,45

2. Colour the blocks:

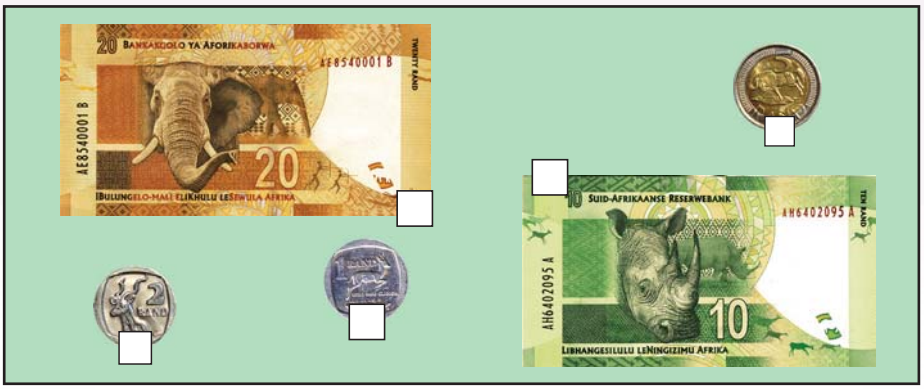
a. R2 = Green

b. R1 = Blue

c. R5 = Red

d. R10 = Purple

e. R20 = Yellow



3. Tick the correct change.

a. I bought sweets for R3,50. I paid with a R5.

b. I bought sweets for R4,89. I paid with a R5,00.

c. I bought sweets for R7,99. I paid with R5, R2 and R2 coin.

d. I bought sweets for 910c. I paid with R10,00.

Coin rubbing and problem solving

a. Take some coins.
Make a coin rubbing by putting a coin under a piece of paper and rubbing over the top with a crayon/pencil.
Cut out the coins and make five of your own sums.

b. Grandmother gives Palesa R12. Palesa wants to save a third of the money. How much money must she save?

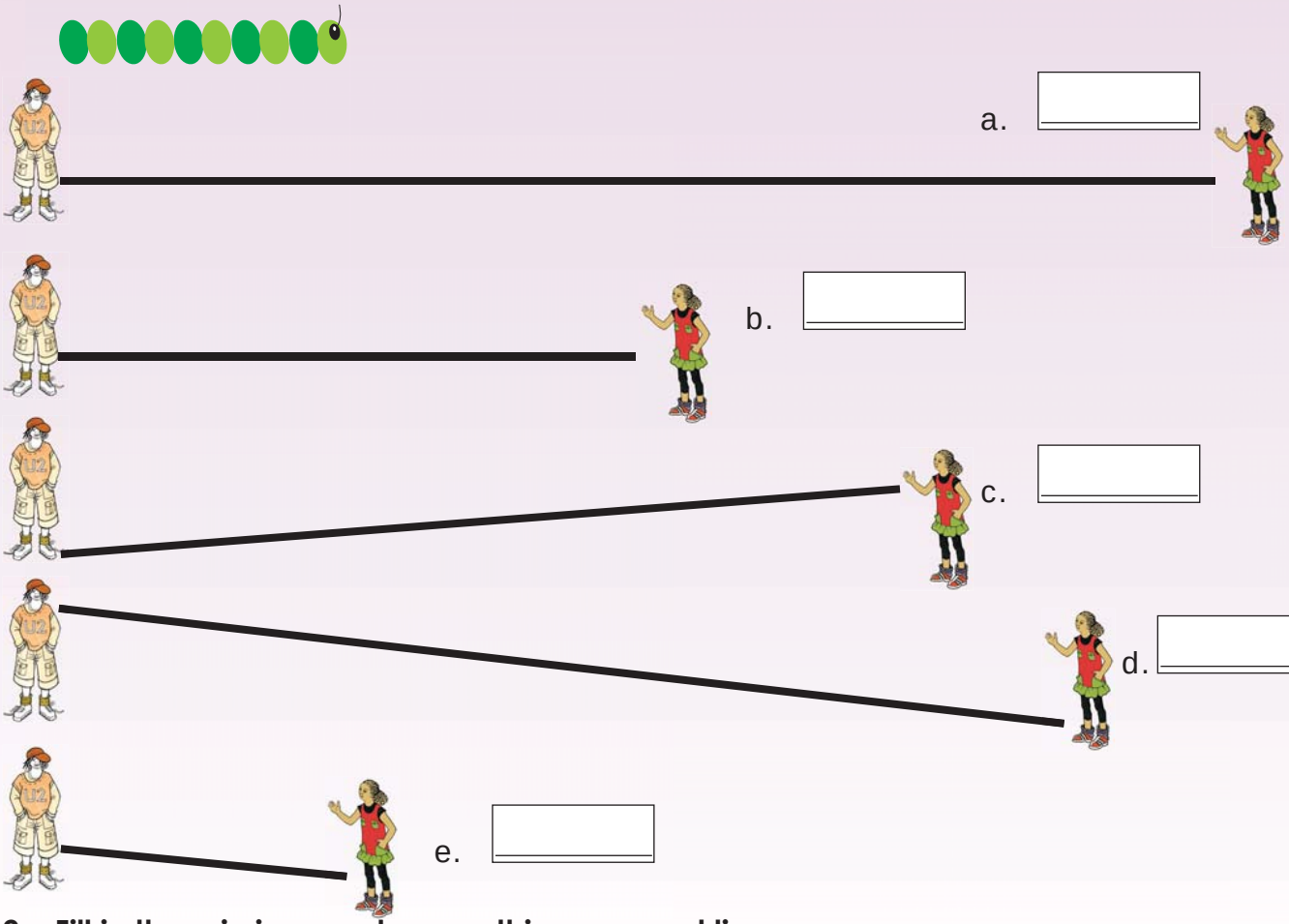
Sign:

Date:

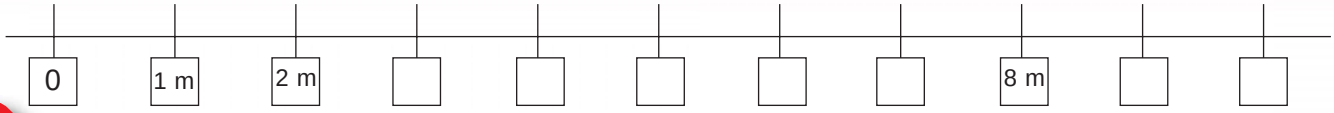
R11 Length

How long is a metre? Can you take a step that is one metre long? How many 30 cm rulers will make 1 metre?

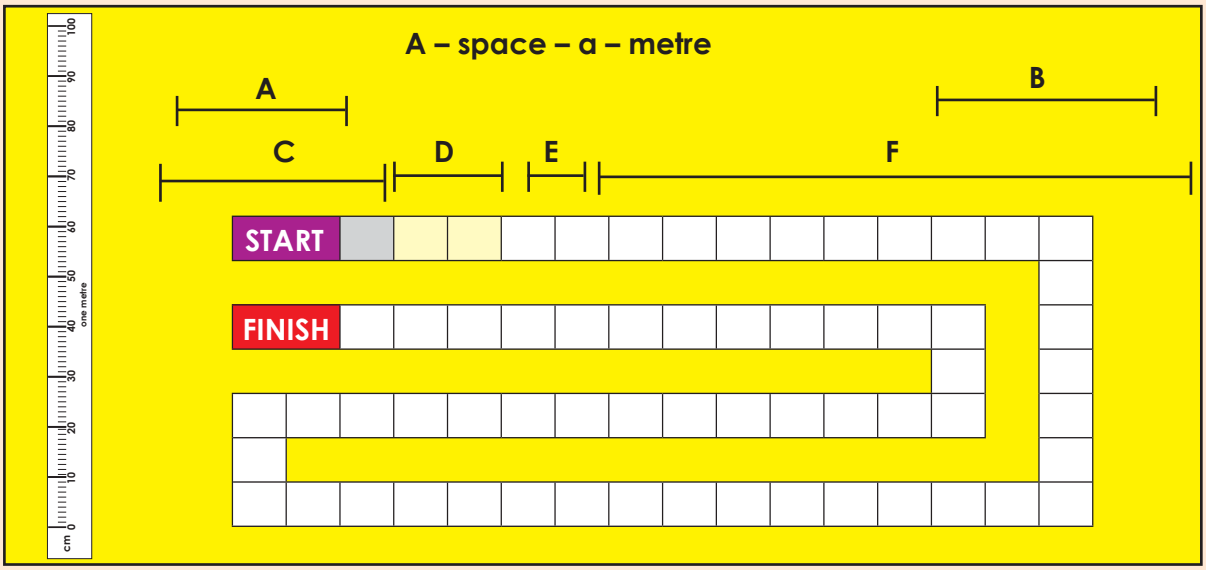
1. If this worm is one metre long, what is the distance from the boy to the girl?



2. Fill in the missing numbers on this measured line.



3. Use the game board to answer the questions:



We have already rolled the dice for you. The length of the line is the number of spaces you moved. We did the first two for you, E=1 and D = 2, so you are standing on square 3 now. Carry on. Colour the blocks as you go. The first one to finish wins.

E
Spaces moved: 1
metres moved: 1

D
Spaces moved: 2 + 1
metres moved: 3

A
Spaces moved:
metres moved:

C
Spaces moved:
metres moved:

B
Spaces moved:
metres moved:

F
Spaces moved:
metres moved:

F
Spaces moved:
metres moved:

B
Spaces moved:
metres moved:

C
Spaces moved:
metres moved:

F
Spaces moved:
metres moved:

A
Spaces moved:
metres moved:

How many more spaces must you move to get to the finish?

Sign:

Date:

R12 Area

Look at the kitchen floor.
How many tiles did I use to tile the floor?

1. Answer the following questions:

a. How many tiles did you use to tile the kitchen floor? _____

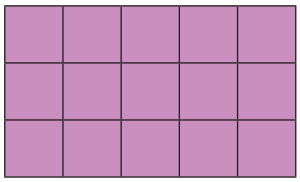
b. How many white tiles did you use to tile the kitchen floor? _____

c. How many black tiles did you use to tile the kitchen floor? _____

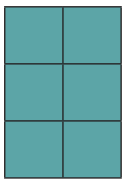
d. The girl takes one step per tile. How many steps will she take to go round the edges of the room on the tiles? _____

2. a. How many tiles are used to tile these floors?
b. What is the distance in tiles around the edges of each floor?

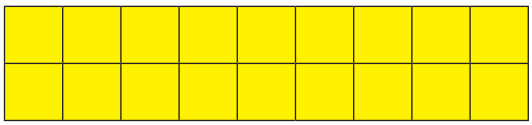
a. _____ b. _____



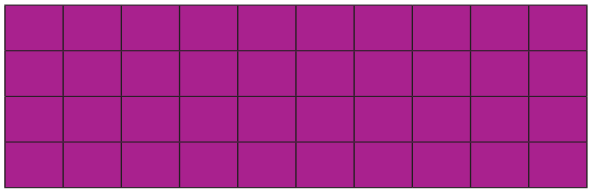
a. _____ b. _____



a. _____ b. _____



a. _____ b. _____



3. Use Cut-out 5. You also need glue and a pair of scissors.
Tile all the floors. Try and create a beautiful pattern with your tiles.

a. Total tiles: _____

Total distance (in tiles) around the floor: _____

b. Total tiles: _____

Total distance (in tiles) around the floor: _____

c. Total tiles: _____

Total distance (in tiles) around the floor: _____

d. Total tiles: _____

Total distance (in tiles) around the floor: _____

A4 page ...

tile

How many whole tiles from Cut-out 5 will fit on a sheet of A4 size paper?

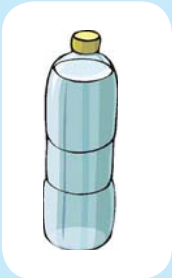
Sign:

Date:

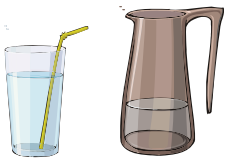
R13 Capacity

This bottle holds 1 litre.

Identify the objects in the kitchen that can hold more or less than 1 litre.



1. **Answer the following questions:**

a. What can take more water than a cup?	b. Is this container full or empty?
c. Is this bottle full or empty?	d. Which container can take more water? 
e. Is this container full or half full?	f. Is this bottle full?

2. **Use the bottle on the left, and estimate whether the container can take more or less than a litre.**

1 litre

a.

b.

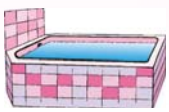
c.

d.

e.

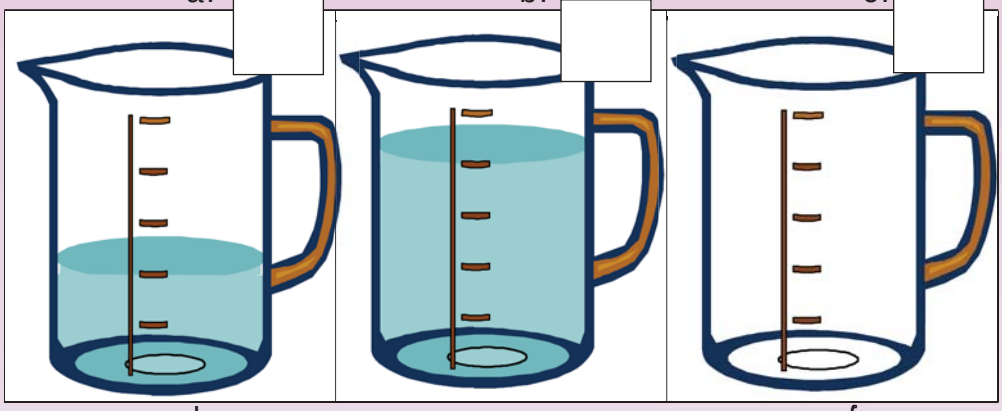
f.

g.

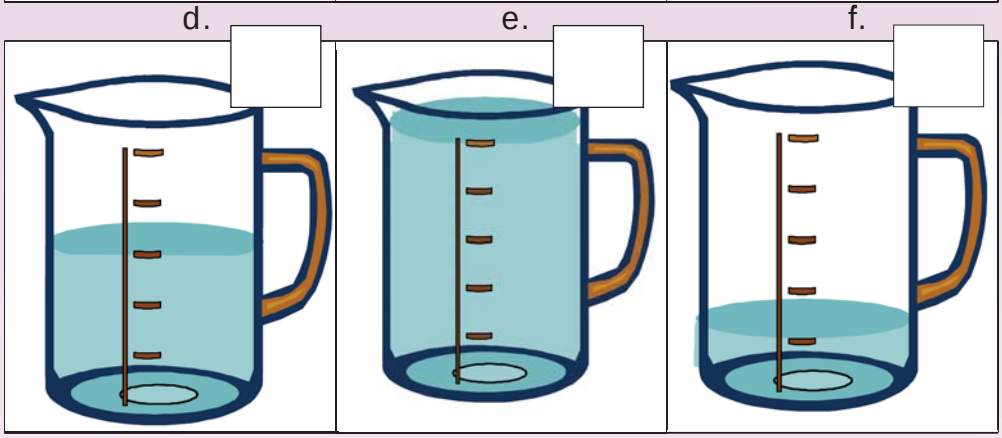
h. 

3. How many bottles of water did you take to fill each measuring jug?
The picture on the left will guide you.

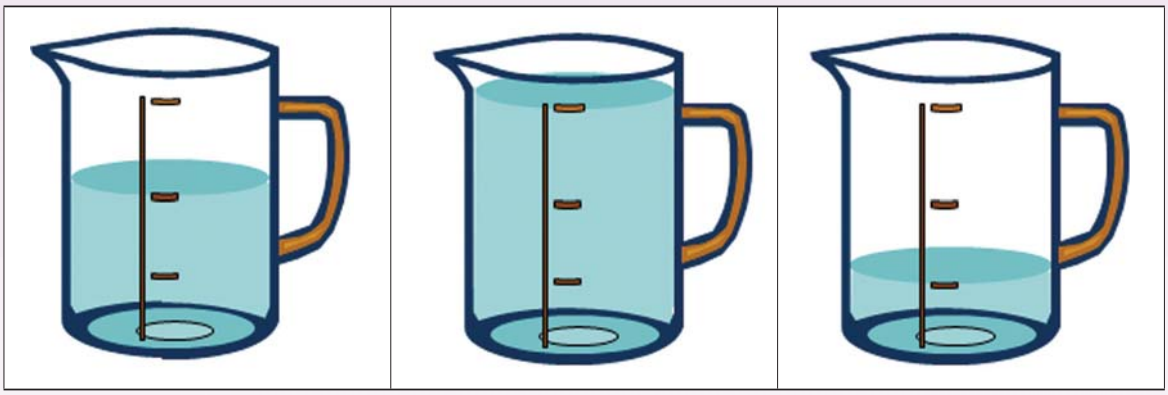
a. b. c.



d. e. f.



4. If each jug takes 3 litres of water, how many litres of water are there in each jug?



a. _____ b. _____ c. _____

Capacity fun ...

Make a list of 10 things in your house that have a capacity of 1 litre.

Sign:

Date:

2-D Shapes and 3-D Objects

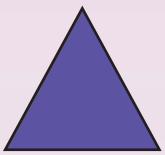
How many shapes and objects can you find?

Words that can help:

Rectangle
Square
Box (Prism)
Cylinder
Circle
Triangle
Ball (Sphere)

1. Name the following shapes:

a.



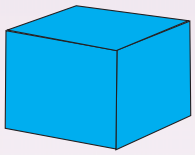
b.

c.

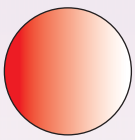
d.

2. Name the following objects:

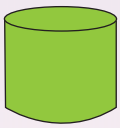
a.



b.



c.

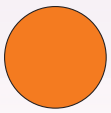


3. Colour the correct word or words.

a.

Straight edges	Curved edges

b.

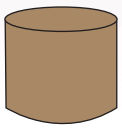


Straight edges	Curved edges

c.

Round surfaces	Flat surfaces

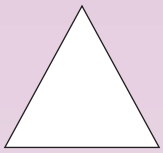
d.



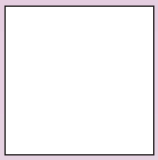
Round surfaces	Flat surfaces

4. Draw a line of symmetry.

a.



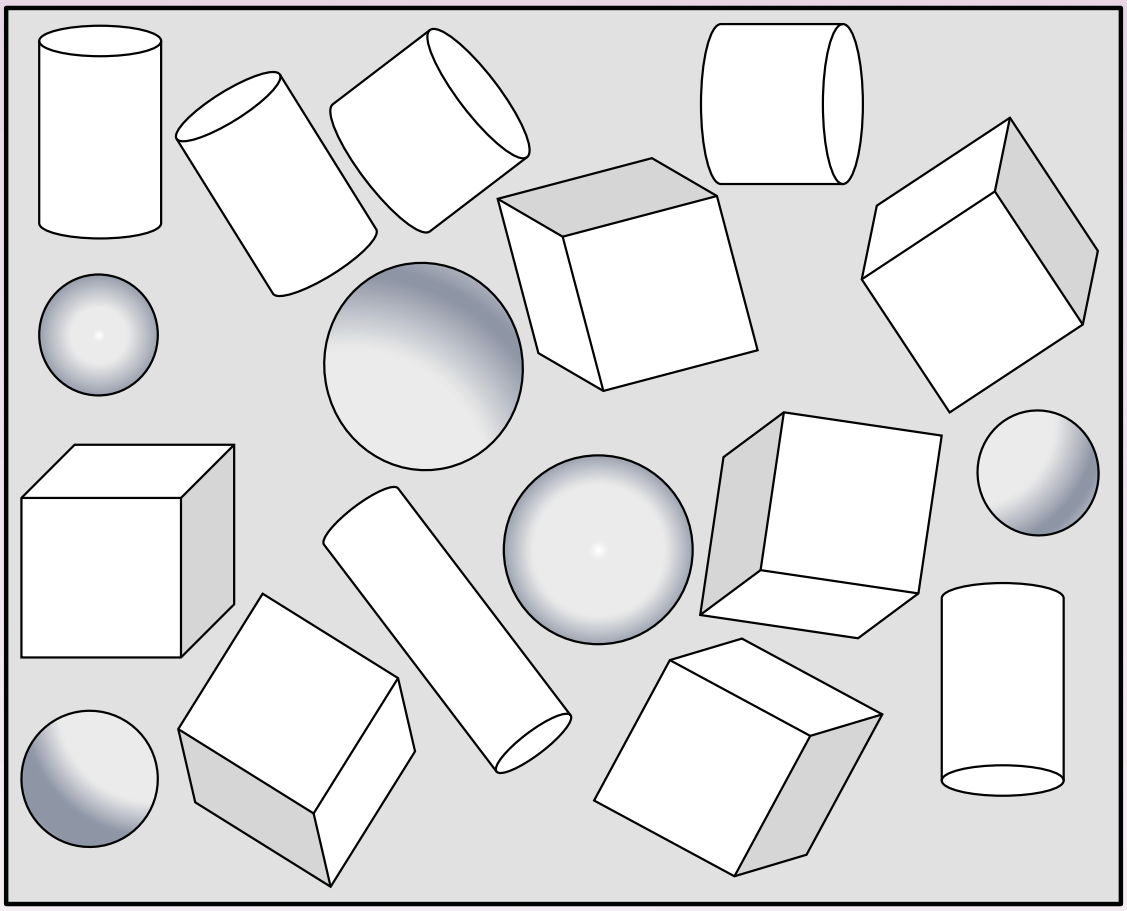
b.



c.

5. Colour all the cylinders blue. Then write on each object if it can:

- Roll only (R)
- Slide only (S)
- Roll and Slide (RS)



Find pictures ...

What to do:

- Go through a magazine, newspaper or an advertisement.
- Find pictures of five things that look like a:
  - cylinder
  - cube
  - ball (sphere)

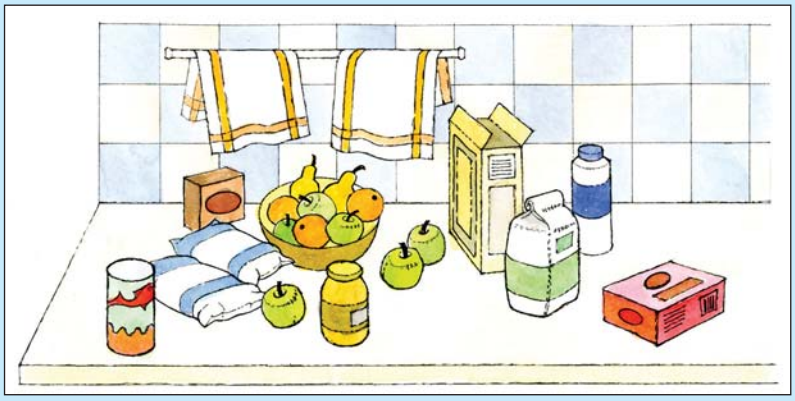
Which object was the easiest to find? Which object was the most difficult to find?

Sign:

Date:

R15 Weight (Mass)

Did you know that an average pineapple weighs 1 kg? Identify the objects in the kitchen that are heavier or lighter than a pineapple.



1. Answer the questions.

a. What is lighter than a brick?	b. What is heavier, a full or an empty bag?
c. Is this bag heavier or lighter than a pineapple?	d. Are the biscuits heavier or lighter than the handbag?
e. Is this bag heavy or light?	f. Is this suitcase heavy or light?

2. Use the object on the left to estimate whether the object is heavier or lighter than a kilogram.

1 kg

a. feather

b. shoes

c. cupcake

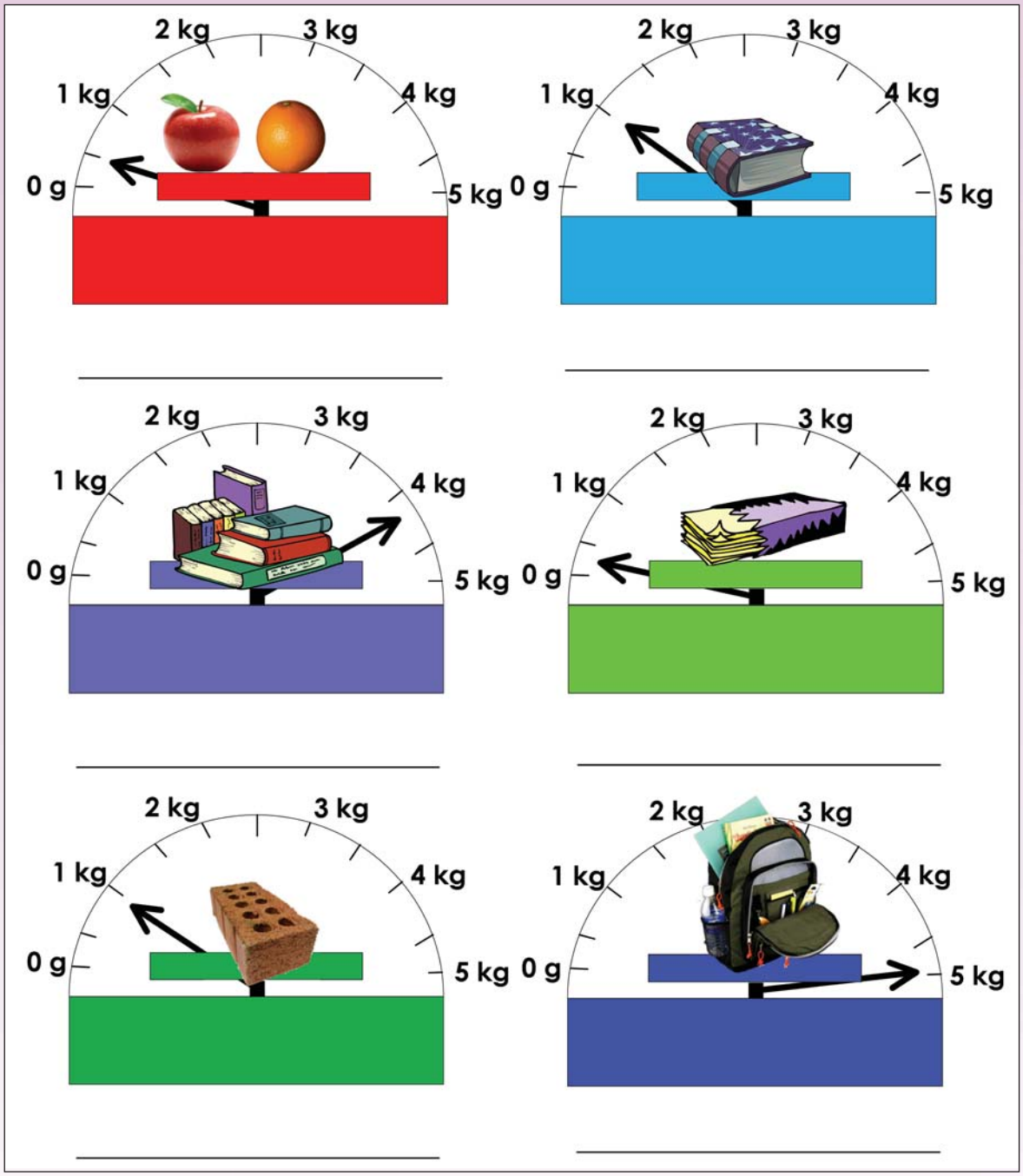
d. crayon

e. school bag

f. pencil case

g. packet of chips

3. Say if the object (or objects) weigh more, less or the same as 1 kilogram.



Mass fun …

What to do:

– Make a list of 10 things in your house that weigh about 1 kilogram each.

Sign:

Date:

1. Sort the fruit using the circles below. Make drawings:

naartjies

apples

bananas

strawberries

a. How many naartjies are there? _____

b. How many apples are there? _____

c. How many bananas are there? _____

d. How many strawberries are there? _____

2. Draw a pictograph.

Our favourite fruit

a. Do children like bananas or apples more? _____

b. Do children like strawberries or naartjies more? _____

c. What is the most popular fruit? _____

d. What is the least popular fruit? _____

Find a graph

Search through a newspaper for graphs. Bring one example of a graph to the classroom.

Sign:

Date:

Notes

Rainbow WORKBOOKS

Grade 4

Mathematics

PART 2

WORKSHEETS

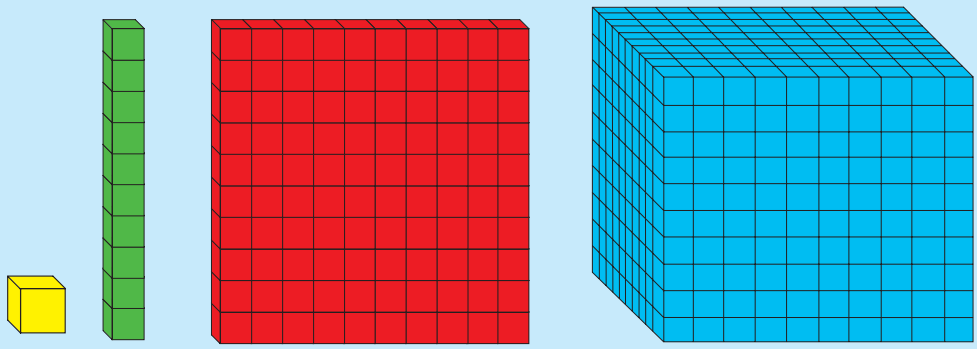
1 to 64

ENGLISH

Book 1

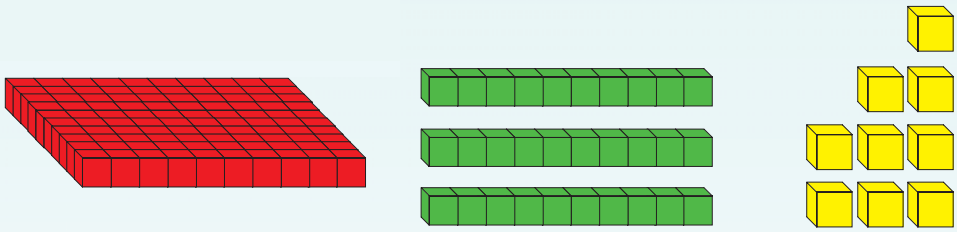
Numbers 0 to 1 000

How many cubes are there in total?



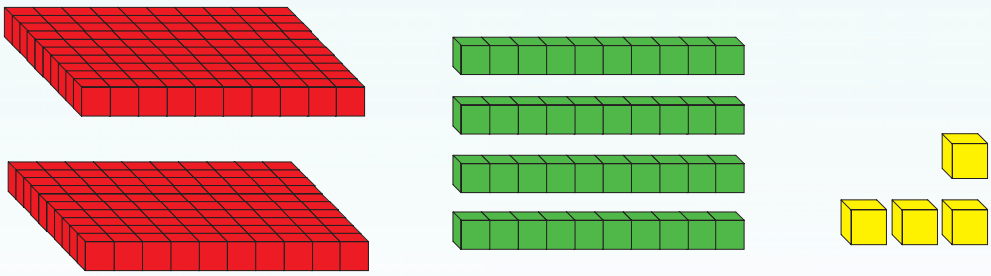
1. Count the cubes.

a.



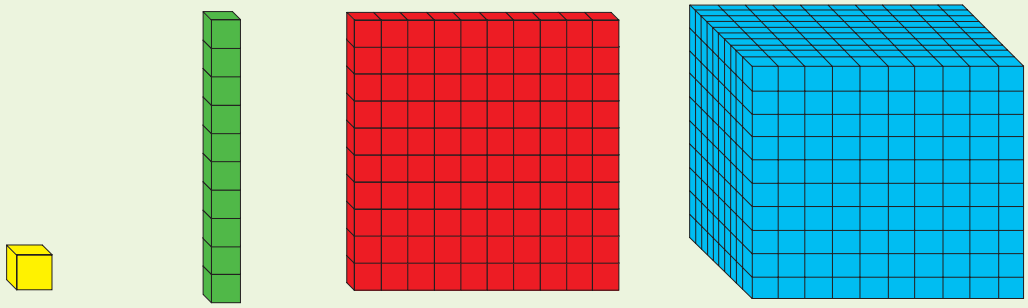
_____

b.



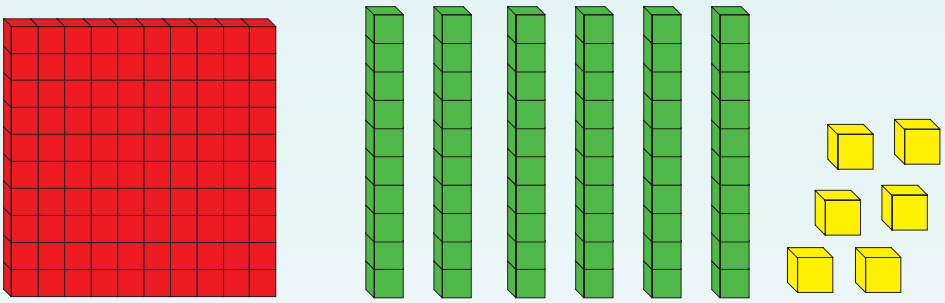
_____

2. How many cubes are there in total?

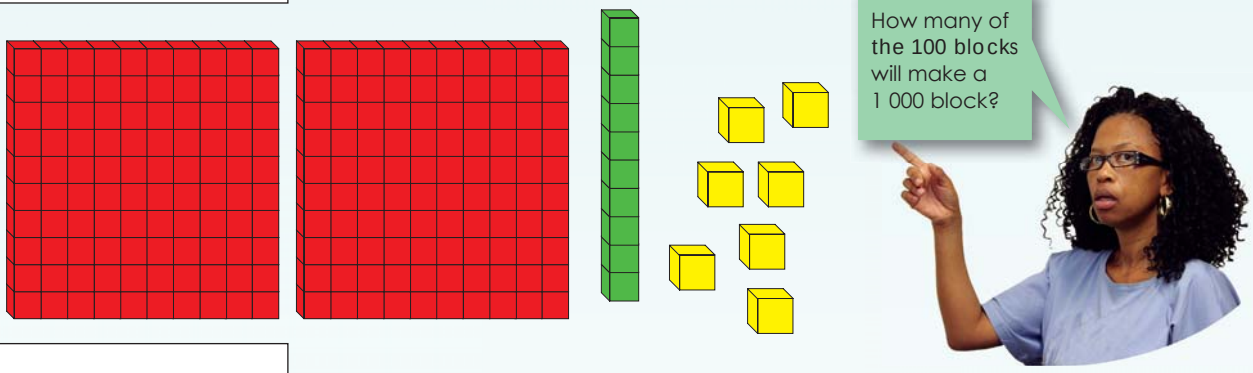


= 1 = 10 = 100 = 1000

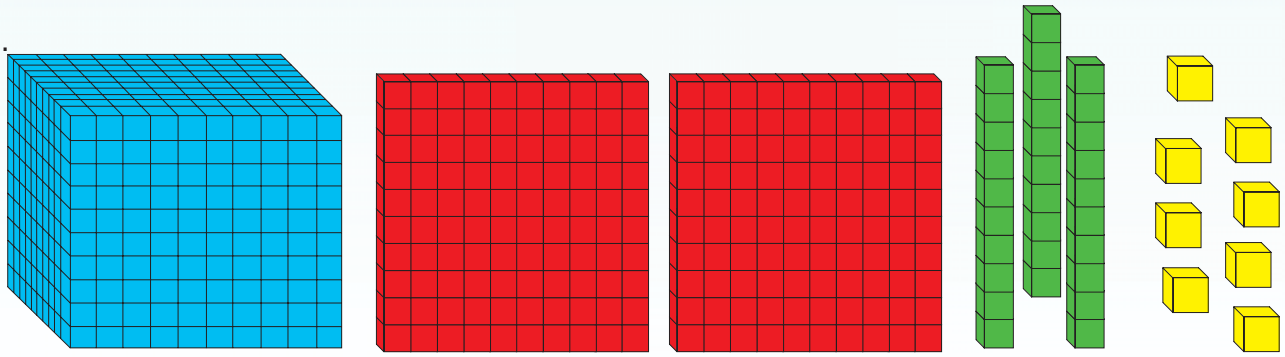
a.



b.



c.



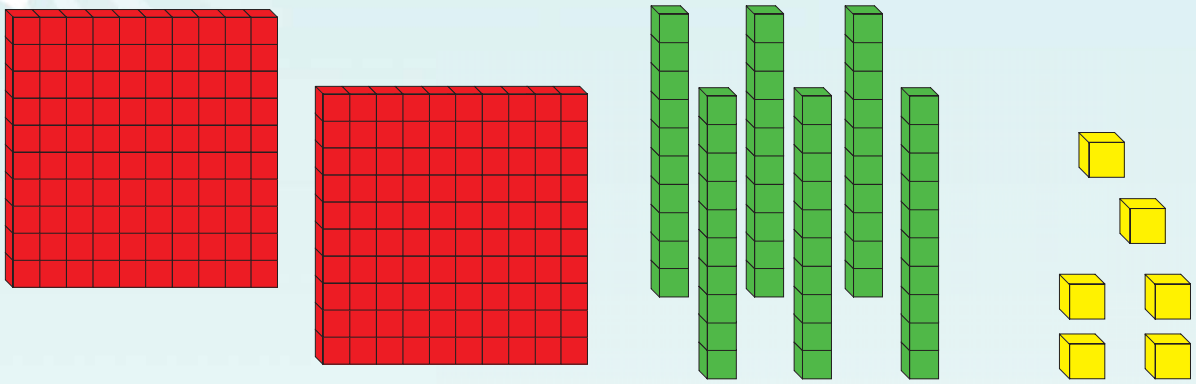
Sign:

Date:

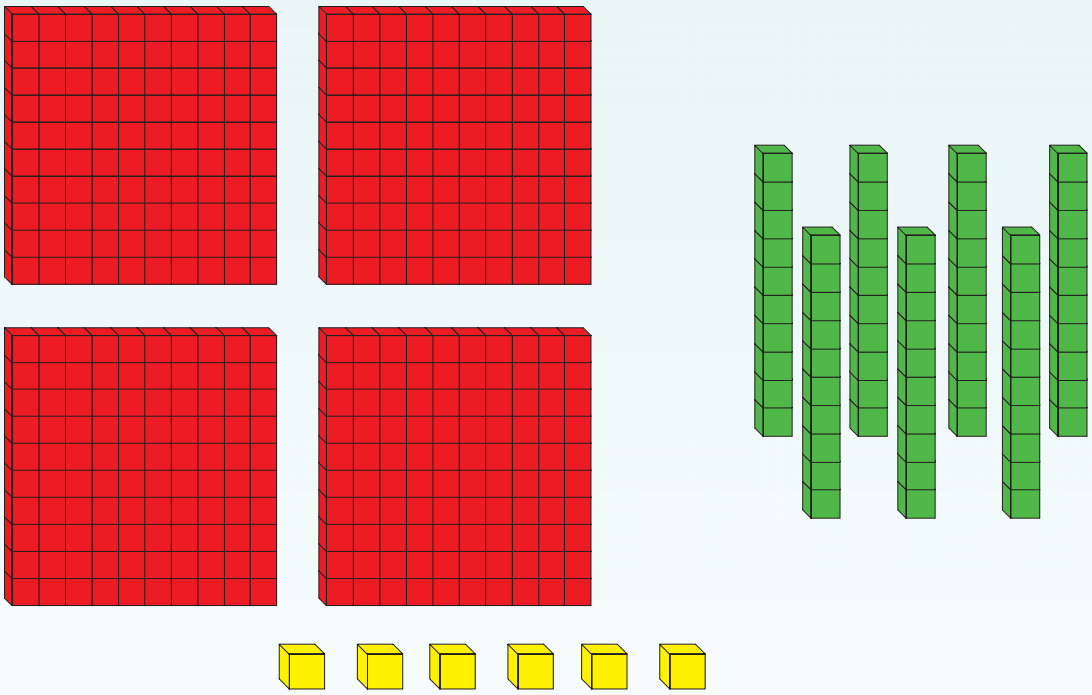
continued ☛

Numbers 0 to 1 000 continued

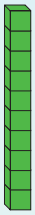
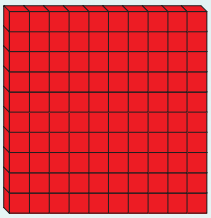
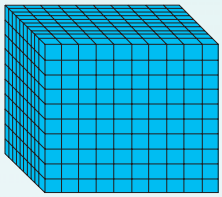
d.



e.



3. Match column A with column B

A	B
a.	1 0 0
b. 	1
c. 	1 0
d. 	1 0 0 0

4. Calculate the following:

a. 1 0 + 1 = 1 1 = 11

b. 1 0 + 1 0 0 + 1 = 1 1 1 = 111

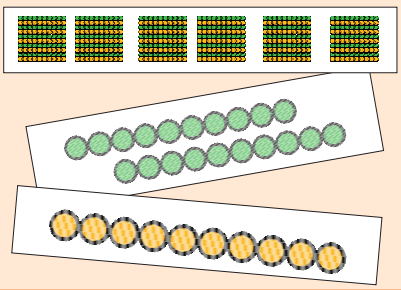
c. 1 0 0 + 1 0 0 + 1 0 0 + 1 0 + 1 0 + 1 0 + 1 + 1 =

d. 1 + 1 + 1 + 1 0 + 1 0 + 1 0 + 1 0 + 1 0 + 1 0 0 =

e. 1 0 + 1 0 + 1 0 + 1 0 0 + 1 0 0 + 1 0 0 + 1 0 0 + 1 =

How quick are you?

What you need:
- Cut-out 1.



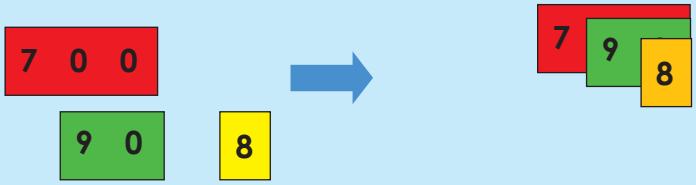
What to do:
- Play in pairs.
- Cut out the cards from the back of your books.
- Place them face down on your desk.
- You choose five cards and your partner chooses five.
- See who can give the total the quickest.
- Add 100 to your answer.
- Check your partner's answer.
- Do the same with 6/7/8/9/10 cards. Remember to add 100.
- The person with the most correct answers is the winner.

Sign:

Date:

2 More numbers 0 to 1 000

What number will these cards make?



798

In words it is

Seven hundred and ninety-eight

Seven hundred and ninety-eight

1. Complete the following:

a. 6 0 0 + 4 0 + 3 = 643

b. 3 0 0 + 8 0 + 5 = _____

c. 4 0 0 + 1 0 + 9 = _____

d. 1 0 0 + 2 0 = _____

e. 8 0 0 + 6 = _____

2. Complete the following:

a. 100 + 60 + 4 = _____

b. 200 + 10 + 8 = _____

c. 900 + 90 + 9 = _____

d. 600 + 20 = _____

e. 700 + 7 = _____

3. Write the number in the correct column:

		Hundreds	Tens	Units
a.	923	9	2	3
b.	113			
c.	204			
d.	580			
e.	600			

4. You need some coloured pencils do complete this question.

Complete the following using the first question to guide you.

a. 247 = **2 hundreds + 4 tens + 7 units**

b. 892 = _____

c. 384 = _____

d. 566 = _____

e. 201 = _____

5. Complete the table below:

		Expanded notation	Words
a.	493		
b.	900		
c.	187		
d.	349		
e.	420		

6. What is the value of the underlined digit?

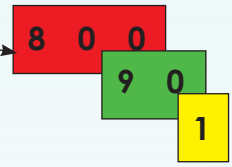
a. 8<u>9</u>1 _____

b. 32<u>0</u> _____

c. <u>5</u>54 _____

d. 6<u>3</u>2 _____

e. 0<u>4</u>7 _____



Find the number.

What to do:

- Bring a newspaper to class.
- Find five 3-digit numbers.
- Write them down.
- Share with the class what each number means.

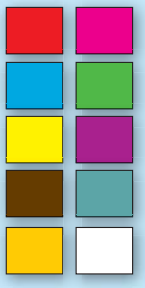
What you need:
- A newspaper

Sign:

Date:

3 Even more numbers 0 to 1 000

Choose a colour on the left. Find the matching colour on the right. Choose 5 numbers smaller and 5 numbers bigger than the number (where possible).



235 235 10 235 361 487 145 599 985 701

1. Arrange the numbers from the smallest to the biggest.

a. 896, 689, 888, 698, 986 _____

b. 426, 626, 642, 264, 269 _____

c. 735, 365, 373, 335, 533 _____

d. 400, 404, 304, 340, 430 _____

e. 999, 292, 922, 902, 920 _____

2. Fill in < or >.

a. 623 _____ 263

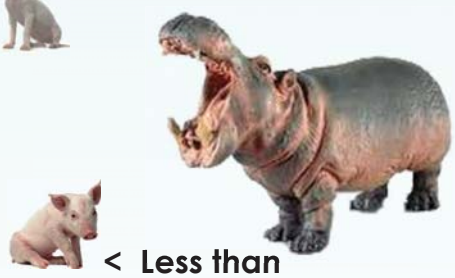
b. 196 _____ 916

c. 505 _____ 500

d. 334 _____ 344

e. 829 _____ 892

Greater than >



< Less than

3. What is the value of the digit 4 in these numbers?

a. 964 _____ b. 204 _____ c. 468 _____

d. 459 _____ e. 341 _____

4. Complete the following: 8 2 5

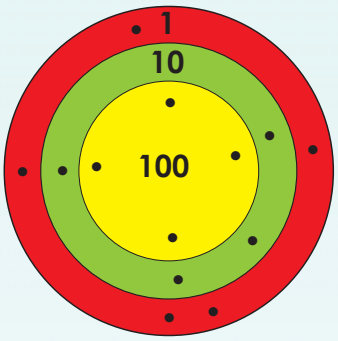
a. Use each digit once. Make the smallest 3-digit number: _____

b. Use each digit once. Make the largest 3-digit number: _____

c. You can use a digit twice. Make the smallest 3-digit number: _____

d. You can use a digit twice. Make the largest 3-digit number: _____

5. Complete the following:



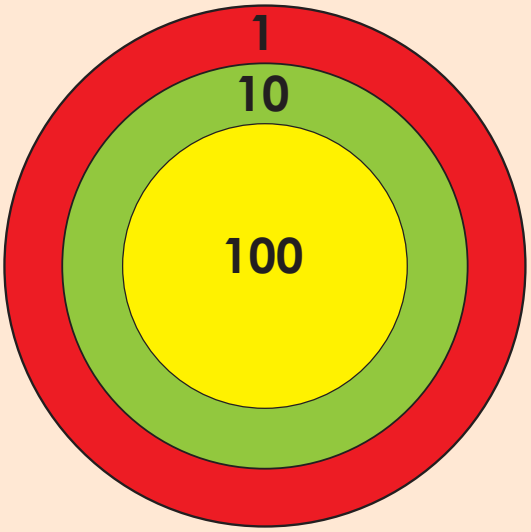
You tossed some stones on a game board. This were your result. If you add the numbers, what is the total?

_____

Who can get the largest number?

What you need:
- The game board on the right.
- Small stones.

What to do:
- Toss your stone on the board.
- Write down the number it lands on.
- Do this ten times.
- Add the numbers.
- The winner in a group is the person with the biggest number.



Sign:

Date:

4 Rounding off to the nearest 10

Look at the symbols below and describe them.

When we want to write 4 + 5 is equal to 9, we use the symbol

=

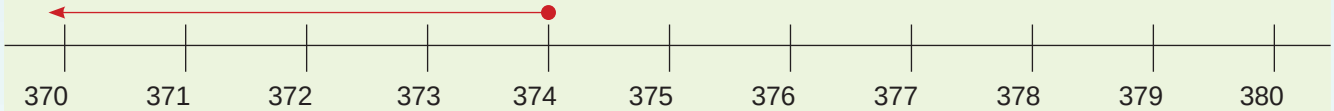
When we want to write 8 rounded off to the nearest 10 we use the symbol

≈

Rounding off to the nearest ten.

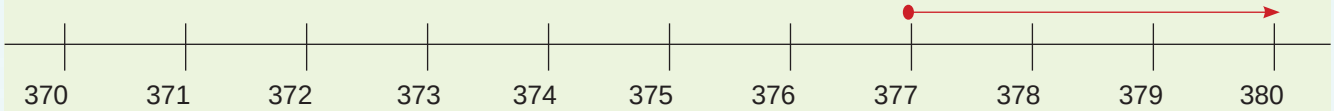
Round off the numbers that end in a digit from **1** to **4** to the previous (lower) ten.

Example: 374 rounded off to the nearest ten would be 370.



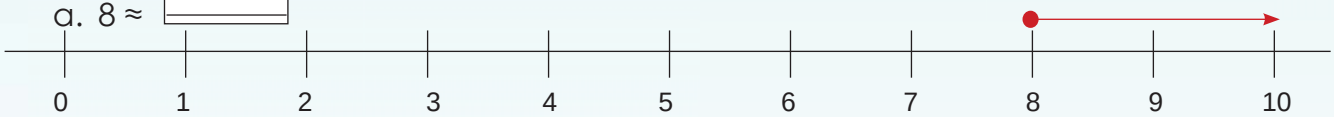
Round off numbers that end in a digit from **5** to **9** to the next (higher) ten.

Example: 377 rounded off to the nearest ten would be 380.

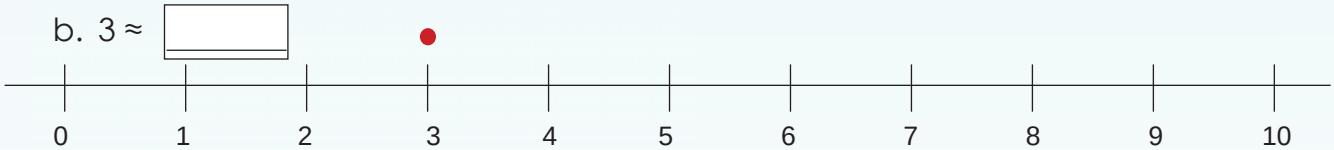


1. Round the following numbers off to the <u>nearest ten</u> using the number lines provided.

a. 8 ≈ ☐



b. 3 ≈ ☐



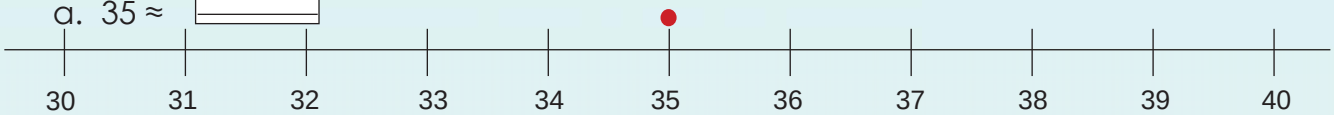
c. 2 ≈ ☐

d. 9 ≈ ☐

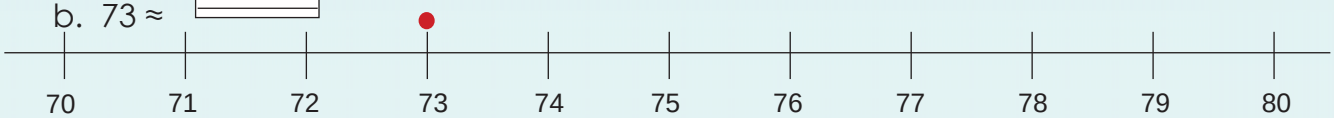
e. 4 ≈ ☐

2. **Round the following numbers off to the nearest ten using the number lines provided.**

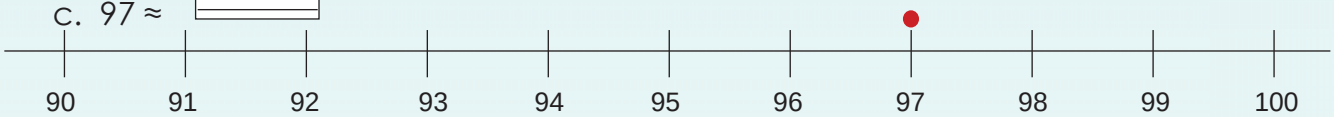
a. 35 ≈ ☐



b. 73 ≈ ☐



c. 97 ≈ ☐

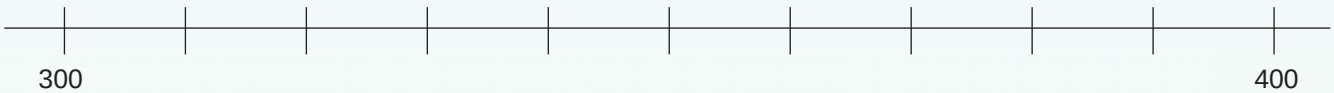


3. **Round the following numbers off to the <u>nearest hundred</u> using the number lines.**

a. 530 ≈ ☐

b. 880 ≈ ☐

c. 360 ≈ ☐

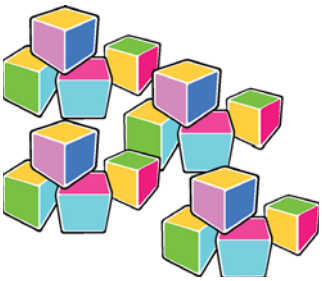


Round up and down

Round off each of these to the nearest 10.

Flowers

Blocks



Marbles

Sign:

Date:

5 Rounding off to the nearest 100

Look at the symbols below and describe them.

When we want to write 30 + 60 is equal to 90, we use the symbol

=

=

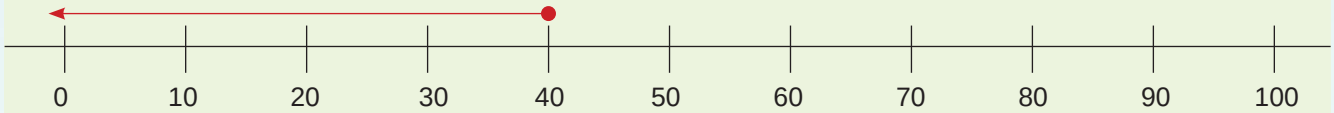
When we want to write 60 rounded off to the nearest 100 we use the symbol

≈

≈

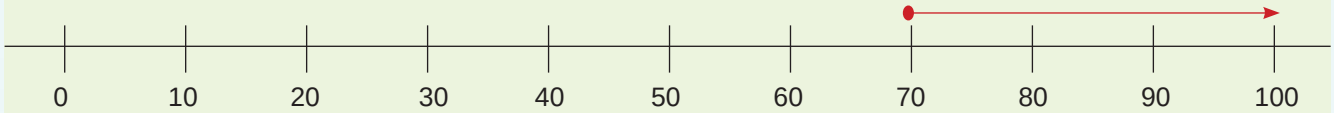
Rounding off to the nearest hundred.

Round off the numbers that start with a digit from **1** to **4** to the previous (lower) hundred. *Example:* 40 rounded off to the nearest hundred would be 0.



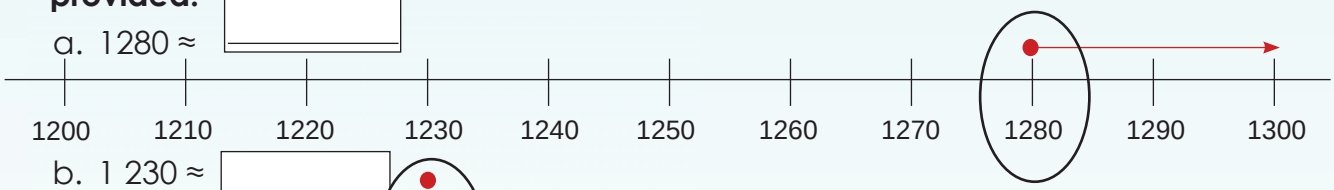
Round off numbers that end in a digit from **5** to **9** to the next (higher) hundred.

Example: 70 rounded off to the nearest hundred would be 100.

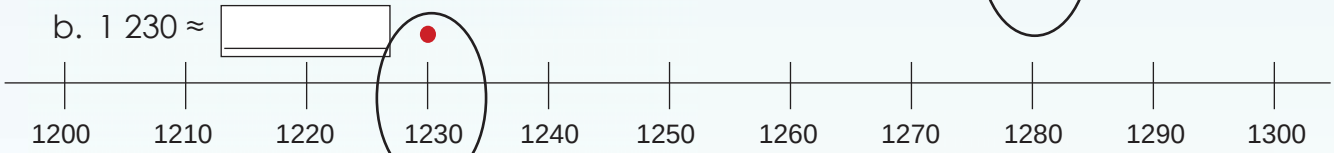


1. Round the following numbers off to the nearest hundred using the number lines provided.

a. 1280 ≈ _____



b. 1 230 ≈ _____



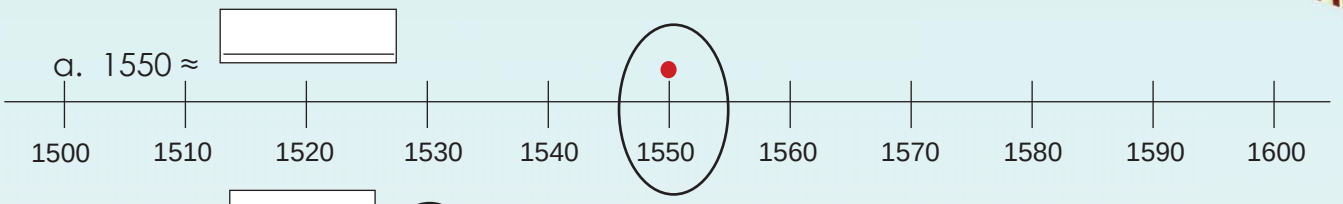
c. 1240 ≈ _____

d. 1250 ≈ _____

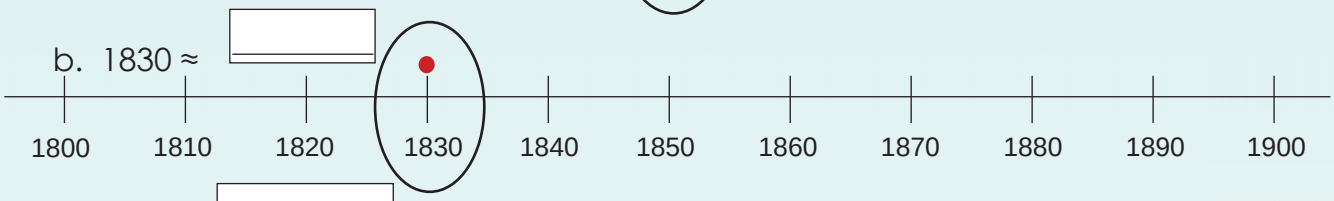
e. 1256 ≈ _____

2. **Round the following numbers off to the <u>nearest hundred</u> using the number lines provided.**

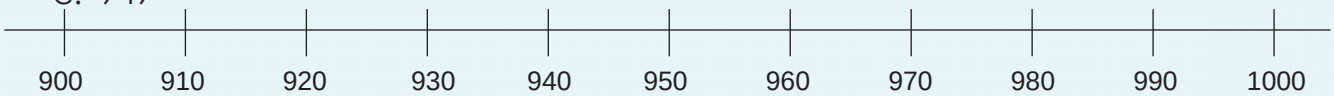
a. 1550 ≈ _____



b. 1830 ≈ _____

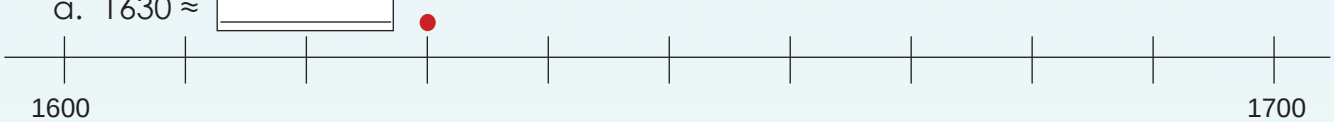


c. 949 ≈ _____



3. **Round the following numbers off to the <u>nearest hundred</u> using the number lines provided.**

a. 1630 ≈ _____

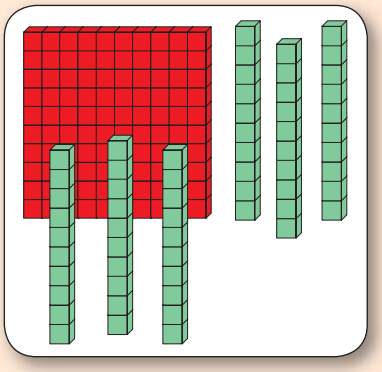


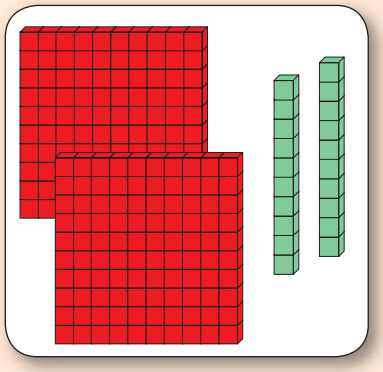
b. 1760 ≈ _____

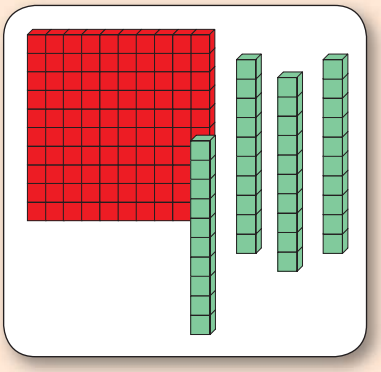
c. 1360 ≈ _____

Rounding off

– Round each off to the nearest 100.





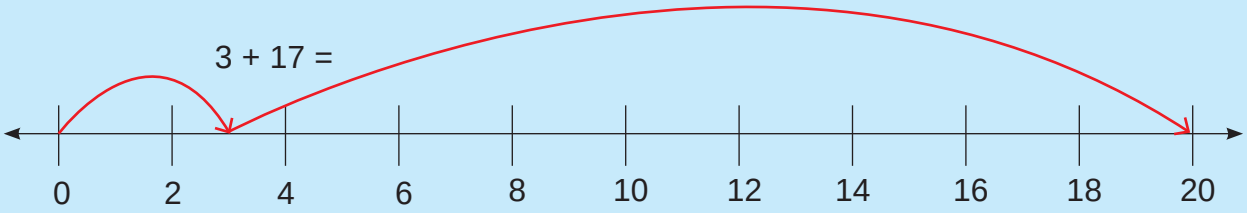


Sign:

Date:

6a Number sentences

Here is one combination that will give you 20. How many more combinations can you come up with? Write them down on an extra sheet of paper.



1. Fill in the missing number.

a. 3 + 7 = ☐

b. 8 + ☐ = 10

c. 3 + ☐ = 10

d. 10 – ☐ = 4

2. Fill in the missing number.

a. 13 + 7 = ☐

b. 8 + ☐ = 20

c. 3 + ☐ = 20

d. 20 – ☐ = 4

3. Fill in the missing number.

a. 230 + 70 = ☐

b. 240 + 60 = ☐

c. 240 + ☐ = 300

d. 230 + ☐ = 300

4. Fill in the missing number.

a. 130 + 170 = ☐

b. 140 + ☐ = 300

c. 130 + ☐ = 300

d. 300 – ☐ = 160

5. Calculate the following:

Example:

58 – 58 = 0 264 – 264 = 0 304 – 0 = 304

When you subtract a number from itself you get zero.

a. 46 – 46 = ____ b. ____ – ____ = 0 c. 165 – ____ = 165

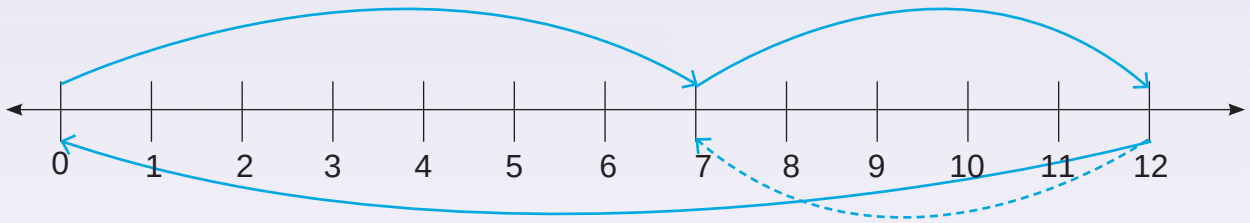
d. 37 – 4 + 4 = ____ e. 27 + 6 – 6 = ____

6. Calculate and show on a number line.

Example:

7 + 5 = 12 therefore 12 – 5 = 7

You can use addition to check subtraction.



a. 8 + 3 = ____ therefore 11 – 3 = ____

7. Calculate the following:

a. 47 + 22 = ____ therefore ____ – 22 = ____

b. 56 + 31 = ____ therefore ____ – ____ = ____

Sign:

Date:

continued ☛

Number sentences continued

8. Complete the equations.

a. 13 + 46 = ☐ or 46 + 13 = ☐

b. 36 + 297 = ☐ or 297 + 36 = ☐

c. 27 + 94 = ☐ or 94 + 27 = ☐

d. 12 + 15 = 15 + ☐

e. ☐ + 6 = ☐ + 7

f. 125 + 164 = 164 + ☐

g. 89 + 46 = 46 + ☐

h. ☐ + 49 = ☐ + 36

i. 174 + 132 = ☐ + ☐

j. 56 – 14 = ☐ + 42

9. Calculate the following:

a. (3 + 2) + 1 = ☐ is the same as 3 + (2 + 1) = ☐

b. (31 + 26) + 19 = ☐ is the same as 31 + (26 + 19) = ☐

c. 51 + (13 + 49) = ☐ is the same as (51 + 13) + 49 = ☐

d. (4 + 3) + 2 = ☐ + (3 + 2)

e. (9 + 6) + 5 = 9 + (☐ + 5)

f. 4 + (2 + 7) = (☐ + ☐) +7

g. (8 + 1) + 4 = ☐ + (1 + 4)

h. 7 +(4 + 2) = (☐ + ☐) + 2

i. (11 + 3) + 2 = 11 + (☐ + 2)

10. Say if the following are true or false.

a. 9 + 8 = 8 + 9

True

b. 3 + 6 = 6 – 3

c. 7 – 4 = 4 – 7

d. 10 – 5 = 5 + 10

e. 8 + 3 = 3 – 8

f. 15 – 10 = 10 – 15

g. 4 + 6 = 6 + 4

h. 4 – 6 = 6 + 4

i. 4 – 6 = 6 – 4

j. 4 + 6 = 6 – 4

k. 2 + (4 + 6) = (2 + 4) + 6

Number problems

a. You have 40 marbles in a bag. Write down all the number sentences that will give you an answer of 40. You should only add two numbers every time.

b. What will happen if I take any two numbers that are the same, and subtract the one from the other?

Sign:

Date:

7a Addition up to 4 digits

What is the difference between the numbers?

1	2	3	4	5	6	7	8	9	10
11	21	31	41	51	61	71	81	91	101
110	120	130	140	150	160	170	180	190	200
100	200	300	400	500	600	700	800	900	1 000
90	190	290	390	490	590	690	790	890	990

1. What number comes next?

a. 8, 9, 10, _____

b. 20, 30, 40, _____

c. 55, 65, 75, _____

d. 95, 195, 295, _____

e. 645, 745, 845, _____

f. 912, 922, 932 _____

2. Complete the table: Add to the given number.

Number	Add 100	Add 10	Add 1
233			
98			
478			
399			
862			

3. Fill in the missing number:

a. 3 + ☐ = 10

b. 17 + ☐ = 20

c. 90 + ☐ = 100

d. 85 + ☐ = 100

e. 78 + ☐ = 100

f. 325 + ☐ = 350

g. 312 + ☐ = 400

h. 350 + ☐ = 525

i. 238 + ☐ = 400

j. 564 + ☐ = 800

4. Complete the table.

	Number	Complete up to the next 10.	Complete up to the next 100.
a.	35	35 + 5 = 40	35 + 65 = 100
b.	265	265 + ☐ = 270	265 + ☐ = 300
c.	342	342 + ☐ = 350	342 + ☐ = 400
d.	486	486 + ☐ = 490	486 + ☐ = 500
e.	964	964 + ☐ = ☐	964 + ☐ = ☐

Sign:

Date:

continued ☛

Addition up to 4 digits continued

Examples:

Example 1:

134 + 123

100	30	4	+	100	20	3

= 100 + 100 + 30 + 20 + 4 + 3

= 200 + 50 + 7

= 257

Example 2:

468 + 274

400	60	8	+	200	70	4

= 400 + 200 + 60 + 70 + 8 + 4

= 600 + 130 + 12

= 600 + 100 + 30 + 10 + 2

= 700 + 40 + 2

= 742

5. Use both methods above to calculate the following.

a. 644 + 120

			+			

= 600 + 100 + 40 + 20 + 4

= _____

= _____

b. 143 + 152

			+			

= _____

= _____

= _____

c. 394 + 468

[ ] [ ] [ ] + [ ] [ ] [ ]

= _____

= _____

= _____

= _____

= _____

d. 1 268 + 324

[ ] [ ] [ ] [ ] + [ ] [ ] [ ]

= _____

= _____

= _____

= _____

= _____

e. 2 374 + 1 287

[ ] [ ] [ ] [ ] + [ ] [ ] [ ] [ ]

= _____

= _____

= _____

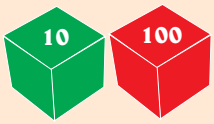
= _____

= _____

What is the size of your number?

What you need:

- Use the 10s, and 100s dice you made before.
- Piece of paper.



What to do:

- Individual game against a group or the class.
- Roll the 10s dice.
- Add the number landed on, to the first number on the blue card. Write your addition sum on a piece of paper.
- Do the same with the 2nd to the 5th number.

115
127
138
149
192

Sign:

Date:

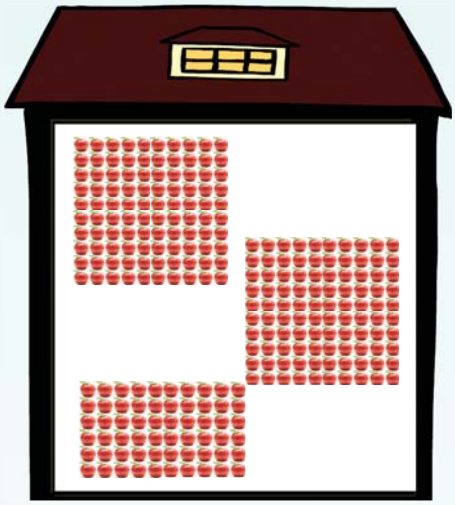
8a Addition problems

How fast can you answer this?

- **Add** 800 + 30 + 5.
- What is the **sum of** 300 and 400?
- How many do 100 and 500 make **altogether** ?
- What three numbers have **a total of** 200?
- Add 25 **and** 18.
- What is **the sum of** 100 and 52?
- How many **altogether** are 42 and 59?
- Which three numbers have **a total of** 80?

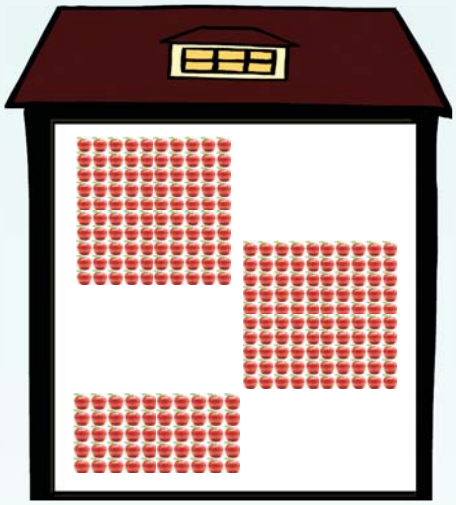
1. Solve the following problems. The pictures may guide you. Also use the blue word.

a. A juice company has 260 apples. They get another 250 apples. How many apples do they have now?



and

+



200 + 200 + ____ + 50

= _____

= _____

= _____

= _____

b. Mandla had 975 oranges. He bought another 155 oranges.
How many oranges does he have?

i. What picture do you see when you think about this problem? Draw it.

ii. What operation should you use? _____

iii. Solve the problem. Write it down in your writing book.

Continue on an extra sheet of paper.

c. Our class collected 421 empty plastic bottles to recycle. The other class collected 375 bottles. How many empty plastic bottles did the two classes collect altogether?

Continue on an extra sheet of paper.

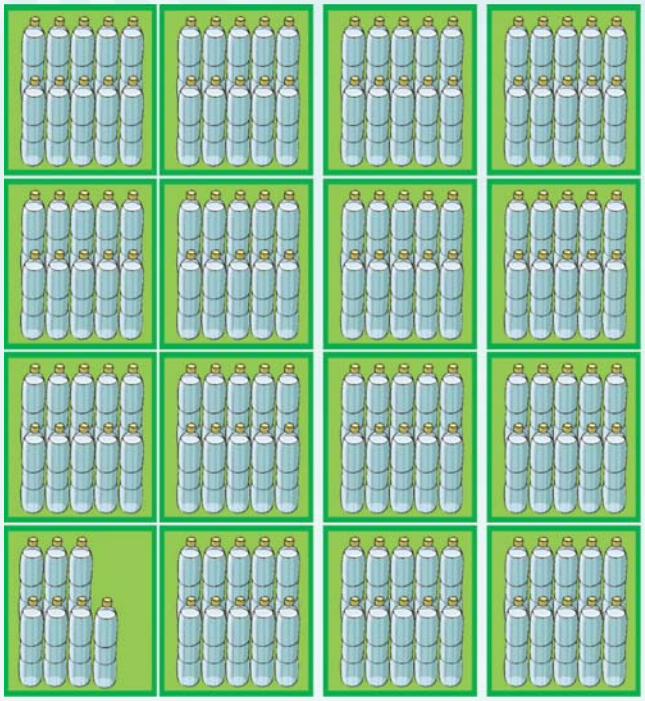
Sign:

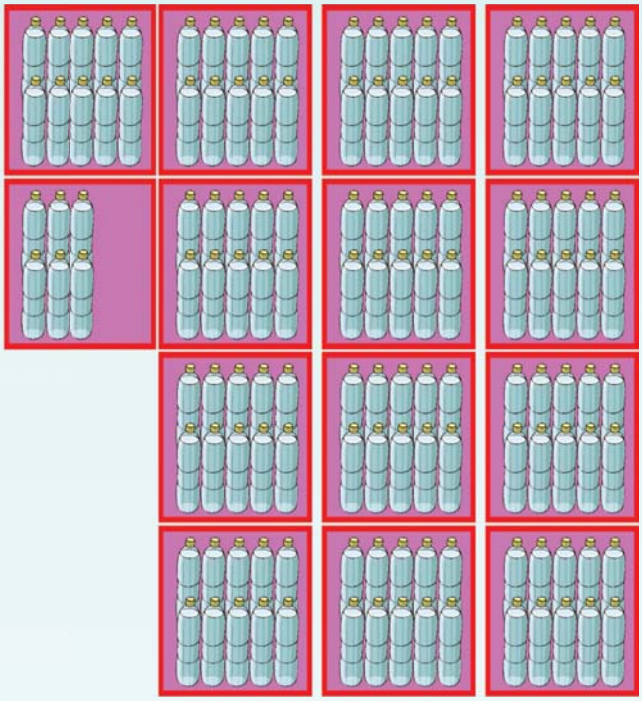
Date:

continued ☛

Addition problems continued

2. Look at the pictures below and write an interesting addition word sum.





Continue on an extra sheet of paper.

3. **Write an appropriate and interesting word sum for: 439 and 514. Solve it.**

Continue on an extra sheet of paper.

Counting houses ...

There were 700 + 10 + 4 houses in Extension 4. Then

400 + 80 + 9 extra houses were built in Extension 4.

How many houses are there now in Extension 4?

Sign:

Date:

9a Subtraction

What is the difference between the numbers?

1	2	3	4	5	6	7	8	9	10
18	28	38	48	58	68	78	88	98	108
20	30	40	50	60	70	80	90	100	110
100	200	300	400	500	600	700	800	900	1 000
990	1 990	2 990	3 990	4 990	5 990	6 990	7 990	8 990	9 990

1. What number comes next?

a. 5, 6, 7, _____

b. 10, 20, 30, _____

c. 135, 235, 335, _____

d. 284, 294, 304, _____

e. 416, 516, 616, _____

f. 574, 674, 774, _____

2. Complete the table: Subtract from the given number.

Number	Subtract 1	Subtract 10	Subtract 100
165			
124			
367			
519			
893			

3. Fill in the missing number:

a. 4 – ☐ = 0

b. 13 – ☐ = 10

c. 75 – ☐ = 70

d. 72 – ☐ = 70

e. 113 – ☐ =100

f. 140 – ☐ = 100

g. 341 – ☐ = 300

h. 945 – ☐ = 800

i. 864 – ☐ = 800

j. 985 – ☐ = 850

Sign:

Date:

continued ☛

Subtraction continued

Example:

913 – 458

900	10	3	–	400	50	8

= (900 – 400) + (10 – 50) + (3 – 8)

= (500) + (0 – 50) + (13 – 8)

= (400) + (100 – 50) + (13 – 8)

= 400 + 50 + 5

= 455

4. Complete the following using the method above:

a. 798 – 164

= (700 – 100) + (90 – 60) + (8 – 4)

= _____

= _____

b. 929 – 174

= _____

= _____

= _____

= _____

= _____

c. 946 – 597

= _____

= _____

= _____

= _____

= _____

d. 2 683 – 1 241

= _____

= _____

= _____

e. 4 384 – 3 872

= _____

= _____

= _____

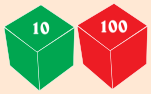
= _____

= _____

What is the size of your number?

What you need:

- Use the 10s and 100s dice previously made.
- Piece of paper.



What to do:

- Individual game against a group or the class.
- Roll the 10s dice.
- Subtract the number landed on, to the first number on the blue card. Write your subtraction sum on a piece of paper.
- Do the same with the 2nd to the 5th number.
- Repeat the activity with the 100s and 1 000s dice.
- Learners check each other's subtraction sums.
- The winner is the person with the most correct answers.

984
421
843
577
659

10a Subtraction problems

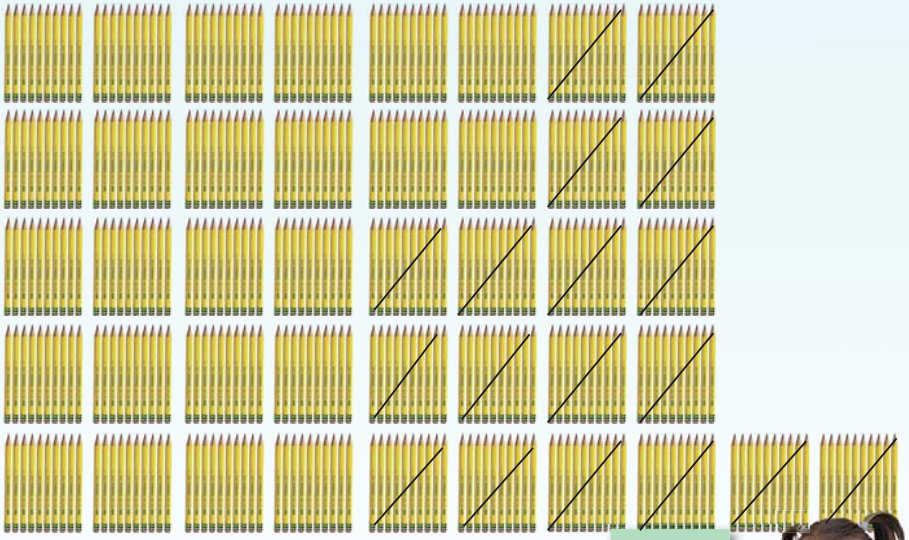
How fast can you answer these?

- **Subtract** 7 000 from 8 000.
- What is the **difference between** 650 and 370?
- **Minus** 700 and 85.
- **Decrease** 100 000 by 10 000.
- **Subtract** 9 000 **and** 820.
- **Reduce** 755 by 102.
- **Take** 150 **from** 1 003.
- **Take away** 37 **from** 2 000.

How did the blue words help you?

1. Solve the following problems. The pictures may guide you. Also use the blue word.

a. Our school bought 420 pencils. We used 180 pencils. How many pencils are left?



What word will help me to choose the operation?

left

−

420 - 180

=

=

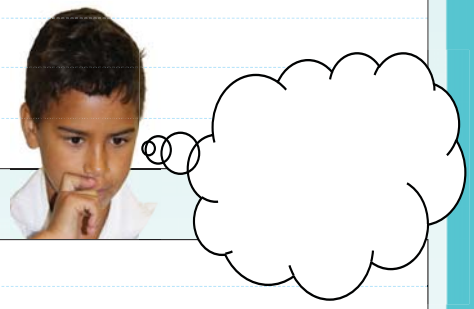
=

=

b. Mpo is selling pencils. She had 800 pencils. She sold 257 pencils. How many pencils does she have left?

i. What picture do you see when you think about this problem? Draw it.

Continue on an extra sheet of paper.



ii. What operation should you use?

Continue on an extra sheet of paper.

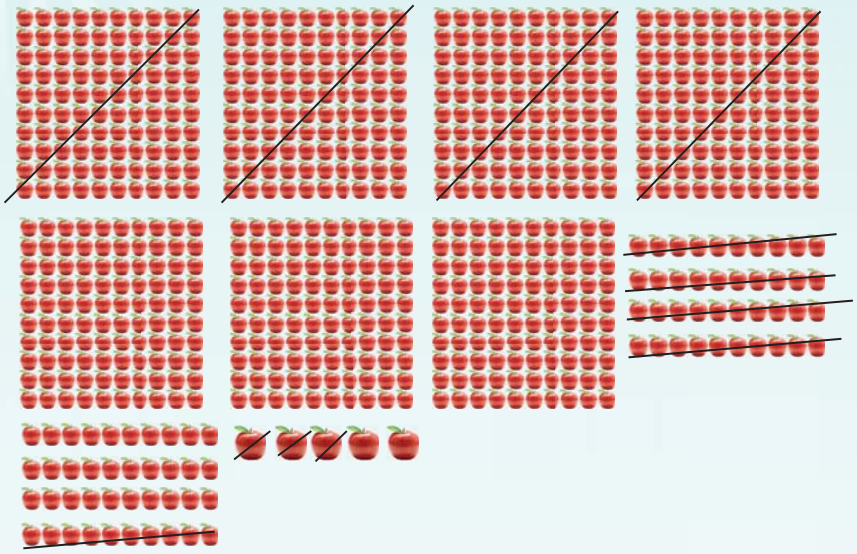
iii. Solve the problem. Write it down in your workbook.

Continue on an extra sheet of paper.

continued ☛

Subtraction problems continued

2. There were 785 apples at the fruit shop. They sold 453. How many apples were left?



Continue on an extra sheet of paper.

3. Write an appropriate and interesting subtraction word sum for: 723 and 189. Solve it.

Continue on an extra sheet of paper.

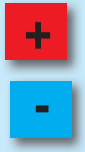
Your own story

Look at the picture and make your own subtraction story.

11a Addition and subtraction problems

How fast can you answer these?

- **Add** 500 and 90.
- **Subtract** 70 from 300.
- 400 **plus** 46 is .....
- The **sum** of 350 **and** 420 is ....
- **Take** 500 **from** 800.
- **Decrease** 950 by 230.
- **Increase** 150 by 370.
- 225 **and** 385 are ....



1. Complete the table below:

	Add 80	Subtract 40	Add 200	Subtract 300
420				
510				
690				
730				
555				

2. Answer the following questions:

a. What is the opposite of + ? _____

b. What is the opposite of − ? _____

3. Calculate the following. Do the calculations in your workbook.

a. 452 + 336 =

b. 289 + 574 =

Continue on an extra sheet of paper.

c. 967 – 153 =

d. 710 – 538 =

Continue on an extra sheet of paper.

4. Check your answers for each of the above calculations, using the opposite operation.

Continue on an extra sheet of paper.

continued ☛

11b Addition and subtraction problems

continued

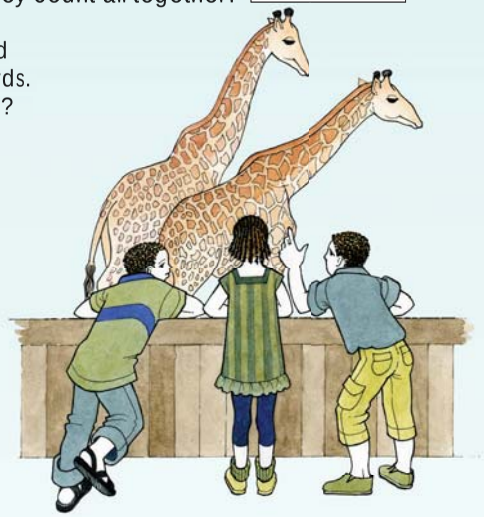
5. Solve the following problems:

a. Thabo and his sisters were counting animals and birds at the zoo. Thabo counted 234 animals, his sister, Susan counted 1 004 birds, and their younger sister, Lindy, counted 538 animals.

i. How many animals and birds did they count all together? _____

ii. The guide told them that they could expect to see 2 000 animals and birds. How many animals did they not see?

_____



b. The book store bought 1200 new books and there were already 1250 on the shelves. They were all put on sale and 1 625 books were sold.

i. How many books were on the shelves before the sale?

Continue on an extra sheet of paper.

ii. How many books were left after the sale?

Continue on an extra sheet of paper.

iii. If the bookshop sells another 500 books, how many books are left?

Continue on an extra sheet of paper.

Coloured numbers

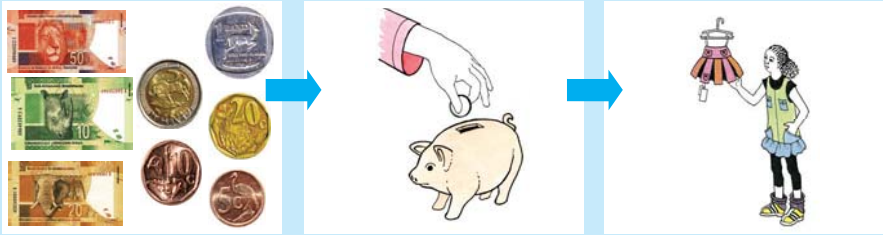
200	500	75	175
10	450	800	20
325	250	120	350
15	150	700	400

What to do:
Play in pairs.

- The first player will say: 'Add green numbers'
- The second player can take any two green numbers and add them. If the player is correct, he or she will get one point.
- The second player will say: 'Subtract yellow numbers'. The first player makes a subtraction sum with any two yellow numbers.
- Carry on playing. The first person with a score of 10 is the winner.

12 Let's talk about money

Talk about money. Look at the picture and make your own story.



1. Colour the combination that will give you:

a. **R5** — R1 R2 R2 R1

b. **R2** — R1 50c R1 50c

c. **R1** — 20c 50c 20c 10c 10c 5c

d. **R1,50** — R1 R1 50c 50c

e. **R1,75** — R1 R10 20c 50c 10c 5c

2. How much money will I have if I save the following amounts?

a. R2 + R1 = _____

b. R5 + R20 = _____

c. R10 + 20c = _____

d. R20 + 50c = _____

e. R1 + 5c = _____

3. How much money will I have left if I spend the following amounts:

a. R5 – R2 = _____

b. R15 – 50c = _____

c. 50 c – 2c = _____

d. R12 – R1,50c = _____

e. R5 – 0,70c = _____

4. Calculate the following:

a. R12 + R2 – R5 = _____

b. R2,50 + 50c – 20c = _____

c. R15 + 5c – 20c = _____

d. R5 + R 1 – R2 = _____

e. R7,25 – R1,05 + 20c = _____

5. How many combinations can you make to get R1,00 ?

Continue on an extra sheet of paper.

Big five ....

What do the big five and money notes have in common?

What does it mean if I pay with "buffaloes"?

13 Number patterns

Describe the pattern.

Did you use words such as odd and even?

1. Complete the flow diagrams.

Input	Rule	Output
25, 71, 63, 38	+5	☐ ☐ ☐ ☐
11, 83, 61, 75	☐	13, 85, 63, 77
☐ ☐ ☐ ☐	+10	49, 58, 92, 31

2. Extend the following patterns:

a. 6, 8, 10, ☐, ☐, ☐

b. 12, 15, 18, ☐, ☐, ☐

c. 30, 35, 40, ☐, ☐, ☐

d. 80, 70, 60, ☐, ☐, ☐

e. 4, 7, 10, ☐, ☐, ☐

f. 12, 18, 24, ☐, ☐, ☐

g. 31, 29, 27, ☐, ☐, ☐

h. 10, 14, 18, ☐, ☐, ☐

i. 49, 44, 39, ☐, ☐, ☐

j. 29, 26, 23, ☐, ☐, ☐

3. Identify the rule in each case.

a. 44, 49, 54, 59 ☐

b. 67, 77, 87, 97 ☐

c. 65, 68, 71, 74 ☐

d. 92, 89, 86, 83 ☐

4. Patterns are shown here. Explain each one in words.

	1	2	3	4	5	6	7	8	9
1	1	2	3	4	5	6	7	8	9
2	2	4	6	8	10	12	14	16	18
3	3	6	9	12	15	18	21	24	27
4	4	8	12	16	20	24	28	32	36
5	5	10	15	20	25	30	35	40	45
6	6	12	18	24	30	36	42	48	54
7	7	14	21	28	35	42	49	56	63
8	8	16	24	32	40	48	56	64	72
9	9	18	27	36	45	54	63	72	81

○ ☐

△ ☐

■ ☐

■ ☐

5. i. Identify the pattern on each number board. **ii. Extend each pattern by five more numbers.**

a.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

☐ ☐ ☐ ☐ ☐ ☐

b.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

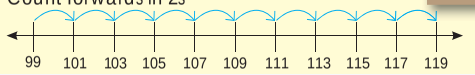
☐ ☐ ☐ ☐ ☐

6. i. Describe the pattern. **ii. Extend the pattern by five more numbers.**

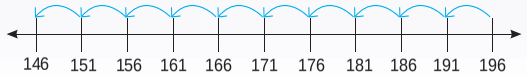
Example:

Look carefully at the arrows

i. Count forwards in 2s



ii. 121, 123, 125, 127, 129

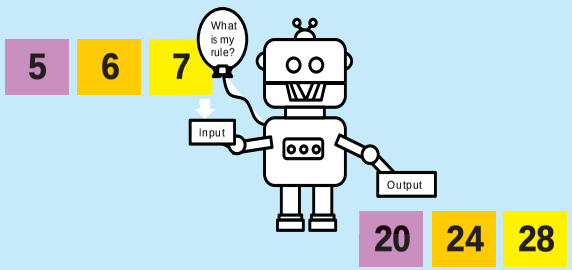


i. ☐

ii. ☐ ☐ ☐ ☐ ☐

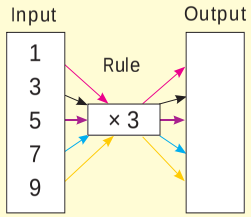
14 Number patterns: flow diagrams and tables

Look at the robot. What is it telling us? Complete the table.

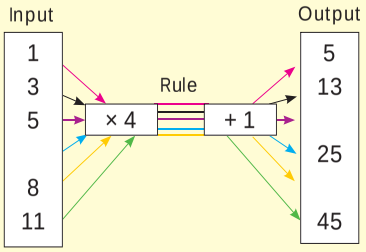


Rule	
Input	Output
5	20
6	24
7	28
8	
9	
10	

Example 1:

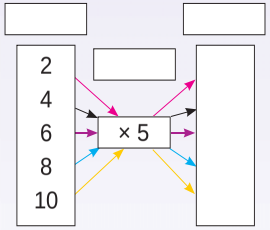


Example 2:

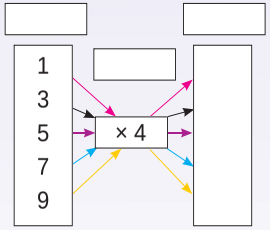


1. Complete and label the flow diagrams.

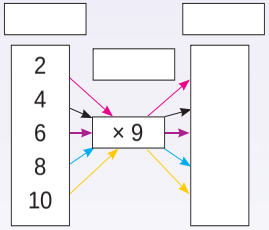
a.



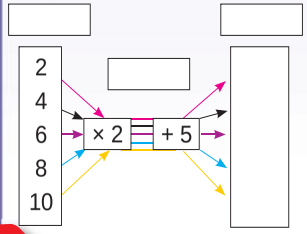
b.



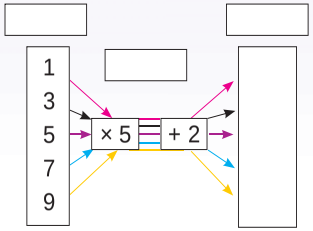
c.



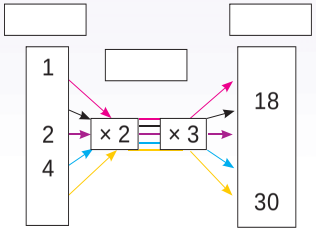
d.



e.



f.



2. Complete and label the following tables:

Example:

	1	2	3	4	5	6	7	8	9	10
× 6	6	12	18		30					60

Rule Output

a.

	1	2	3	4	5	6	7	8	9	10
× 9										

b.

	1	2	3	4	5	6	7	8	9	10
× 8										

c.

	1	2	3	4	5	6	7	8	9	10
× 4										

d.

	1	2	3	4	5	6	7	8	9	10
× 3										

e.

	1	2	3	4	5	6	7	8	9	10
× 20										

f.

	1	2	3	4	5	6	7	8	9	10
× 70										

Number pattern problems

a. Write a number pattern for the following: I am counting in 3s. I start with an even number smaller than 3. What is my pattern?
b. My input numbers are 1, 2, 3, 4 and 5. My rule is x 10. What will my output numbers be?
c. My input numbers are 1, 3, 4, 5 and 7. My rule is x 10 x 8. What will my output numbers be?

15 Multiplication: 2 x to 7 x tables

How would you use this board?

×	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Show with your finger, how you will use the number board to show:

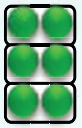
- **3 x 4 = 12**
- **4 x 3 = 12**

- **6 x 7 = 42**
- **7 x 6 = 42**

- **4 x 5 = 20**
- **5 x 4 = 20**

1. Write down repeated addition, multiplication and division sums for the following:

a.



i. ____ rows of ____

ii. Repeated addition:

2 + 2 + 2 = 6

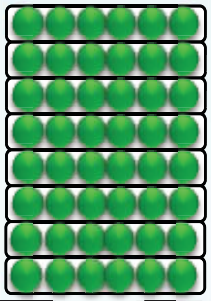
iii. Multiplication:

2 x 3 = 6

iv. Division:

6 ÷ 3 = 2

b.



i. ____ rows of ____

ii. Repeated addition:

____

iii. Multiplication:

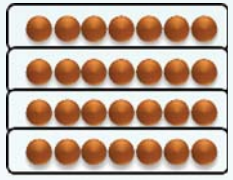
____

iv. Division:

____

Homework

c.



i. ____ rows of ____

ii. Repeated addition:

____

iii. Multiplication:

____

iv. Division:

____

2. Answer the following:

a. Four threes ____

b. 7 groups of 5 ____

c. 4 tens ____

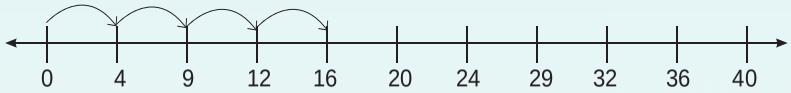
d. Two groups of 6 ____

e. 5 packets of 5 ____

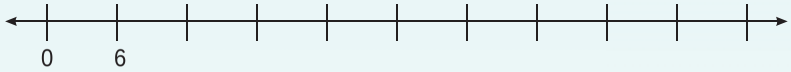
f. Six bags of 3 ____

3. Complete the sums and show the multiplication sum on the number line.

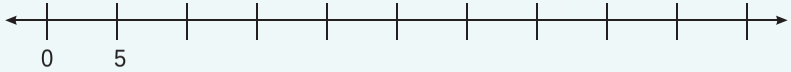
a. 4 × ____ = 16 16 ÷ 4 = ____



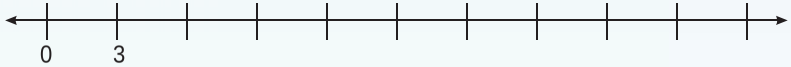
b. 6 × ____ = 24 24 ÷ 6 = ____



c. 5 × ____ = 20 20 ÷ 5 = ____



d. 3 × ____ = 12 12 ÷ 3 = ____



4. Fill in the answer.

a. 2 × 3 = ____

b. 2 x 2 x 5 = ____

c. Double 4 x 2 = ____

d. 3 x 2 x 3 = ____

e. 4 x 2 x 2 = ____

f. Double 5 x 2 = ____

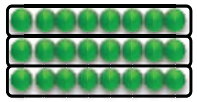
Sweets and scores

a. My friend has 8 sweets. I have twice as many. How many sweets do I have?
b. I scored five times more than my friend. My friend's score was four. How much did I score?

16 Multiplication: 8 x and 9 x tables

If a is 3 groups of 8. What will b and c be? Write down repeated addition, multiplication and division sums for the following:

a.



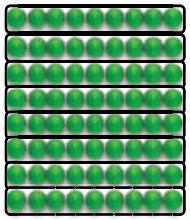
i. _____ **rows of** _____

ii. Repeated addition:
8 + 8 + 8 = 24

iii. Multiplication:
8 x 3 = 24

iv. Division:
24 ÷ 3 = 8

b.



i. _____ rows of _____

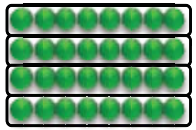
ii. Repeated addition:

iii. Multiplication:

iv. Division:

Homework

c.



i. _____ rows of _____

ii. Repeated addition:

iii. Multiplication:

iv. Division:

1. Complete the following:

a. 1 × 8 = ☐ 2 × 8 = ☐ 3 × 8 = ☐ 4 × 8 = ☐ 5 × 8 = ☐

6 × 8 = ☐ 7 × 8 = ☐ 8 × 8 = ☐ 9 × 8 = ☐ 10 × 8 = ☐

16 ÷ 8 = ☐ 32 ÷ 8 = ☐ 56 ÷ 8 = ☐ 48 ÷ 8 = ☐ 72 ÷ 8 = ☐

24 ÷ 8 = ☐ 40 ÷ 8 = ☐ 8 ÷ 8 = ☐ 64 ÷ 8 = ☐ 80 ÷ 8 = ☐

b. 1 × 9 = ☐ 2 × 9 = ☐ 3 × 9 = ☐ 4 × 9 = ☐ 5 × 9 = ☐

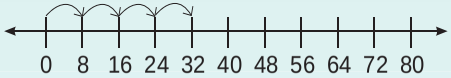
6 × 9 = ☐ 7 × 9 = ☐ 8 × 9 = ☐ 9 × 9 = ☐ 10 × 9 = ☐

18 ÷ 9 = ☐ 36 ÷ 9 = ☐ 54 ÷ 9 = ☐ 72 ÷ 9 = ☐ 81 ÷ 9 = ☐

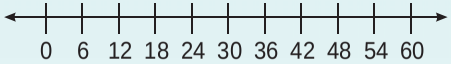
27 ÷ 9 = ☐ 45 ÷ 9 = ☐ 9 ÷ 9 = ☐ 63 ÷ 9 = ☐ 90 ÷ 9 = ☐

2. Complete the sums and show the multiplication sum on the number line.

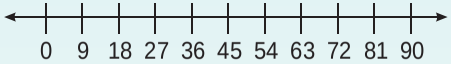
a. 4 × ☐ = 32 32 ÷ 4 = ☐



b. 6 × ☐ = 48 48 ÷ 6 = ☐



c. 9 × ☐ = 81 81 ÷ 9 = ☐



3. Complete the table.

	1	2	3	4	5	6	7	8	9	10
× 8	8	16	24	32						

4. Fill in the answer.

a. 2 × **8** = ☐ b. 7 × **9** = ☐ c. 3 × 2 × **9** = ☐

d. 1 × **8** = ☐ e. 3 × **9** = ☐ f. 2 × 2 × 2 × **9** = ☐

g. 3 × 3 × **8** = ☐ h. 5 × **8** = ☐ i. 2 × 2 × **9** = ☐

j. 5 × 2 × **9** = ☐

5. Answer the following:

a. Eight 3s

b. Four groups of 9

c. Nine 10s

d. 7 groups of 8

e. Eight 9s

f. Eight groups of 8

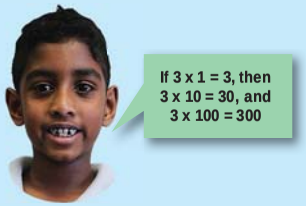
Spiders on a wall

There are five spiders sitting on the wall. How many legs do they have altogether?

17 Multiplication: 1 x and 10 x table

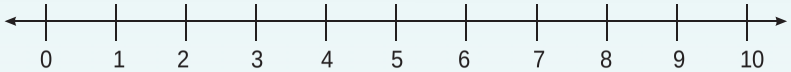
Identify the pattern. What do you think will happen when we multiply with 100?

1 x 1 = 1	1 x 10 = 10
2 x 1 = 2	2 x 10 = 20
3 x 1 = 3	3 x 10 = 30
4 x 1 = 4	4 x 10 = 40
5 x 1 = 5	5 x 10 = 50
6 x 1 = 6	6 x 10 = 60
7 x 1 = 7	7 x 10 = 70
8 x 1 = 8	8 x 10 = 80
9 x 1 = 9	9 x 10 = 90

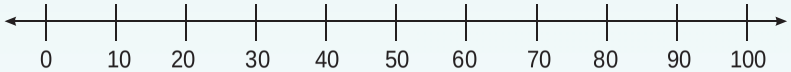


1. Show the multiplication sum on the number lines.

a. **4 × 1 =** ☐



b. **4 × 10 =** ☐



2. Identify the patterns and describe each.

×	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

_____
_____
_____
_____
_____
_____
_____
_____

3. Answer the questions:

a. How fast can you calculate the answers?

1 × 10 = ☐	7 × 10 = ☐
6 × 10 = ☐	2 × 10 = ☐
9 × 10 = ☐	5 × 10 = ☐
3 × 10 = ☐	10 × 10 = ☐
9 × 10 = ☐	4 × 10 = ☐

b. Find the missing number:

2 × ☐ = 2	2 × ☐ = 20	2 × ☐ = 200
4 × ☐ = 8	4 × ☐ = 80	2 × ☐ = 800
9 × ☐ = 27	9 × ☐ = 270	9 × ☐ = 2 700

c. What do you notice? _____

4. My father buys 60 bottles of juice at R6 each. How much did he pay altogether for the juice?

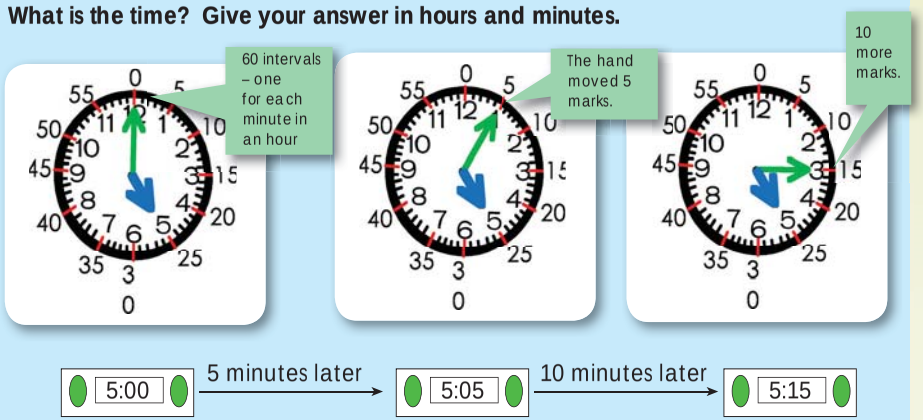
Example:

My mother bought 50 chocolate at R9 each. I help her to calculate the total cost. This is what I did in my head.

Loaves of bread

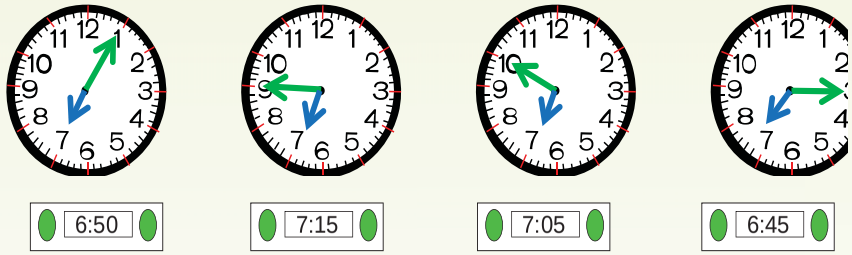
My mother bought 40 loaves of bread at R8 each. My father bought 20 loaves at R9 each. How much did they pay altogether for the bread?

What is the time? Give your answer in hours and minutes.



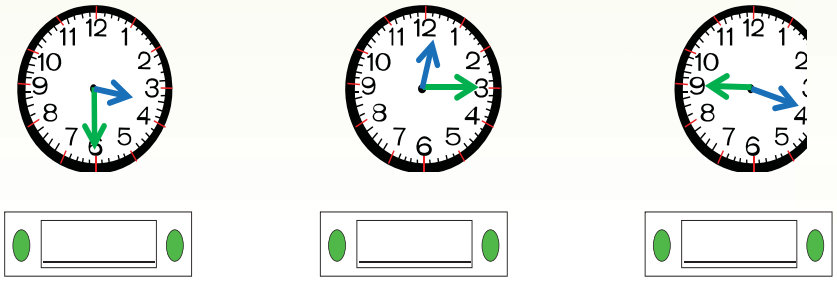
1. Draw a line from the clock face to the digital clock with the same time.

a. b. c. d.

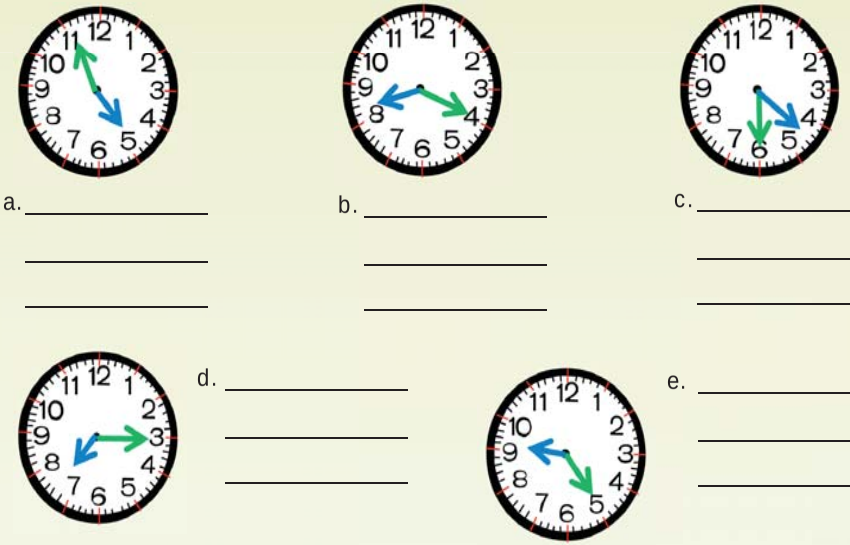


2. Write the following as digital time.

a. b. c.

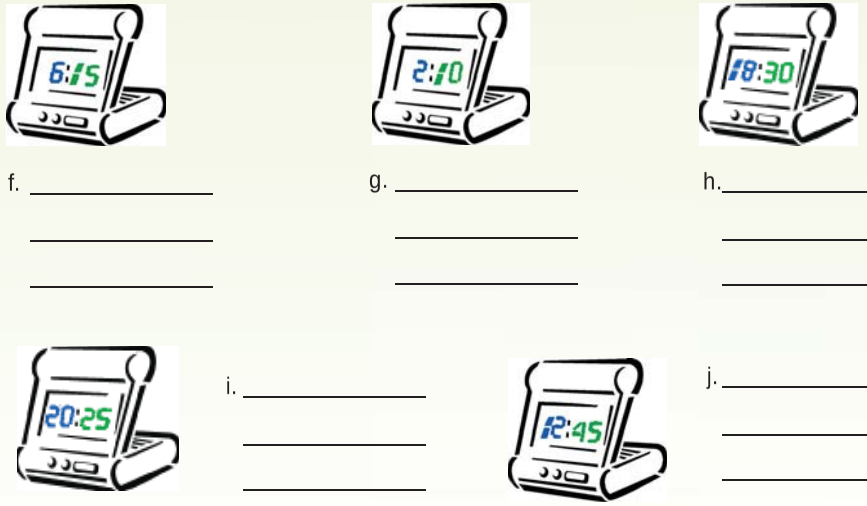


3. Write down in words the times shown on the clock:



a. _____ b. _____ c. _____

d. _____ e. _____



f. _____ g. _____ h. _____

i. _____ j. _____

continued ☛

4. Draw in the following times on the clocks:

a. 1 o'clock

b. 3 o'clock

c. 8 o'clock

d. 11 o'clock

e. 3:45

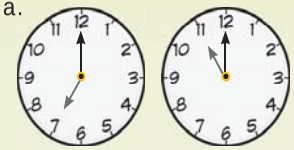
f. 15:20

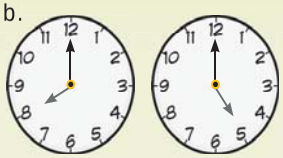
g. 9:30

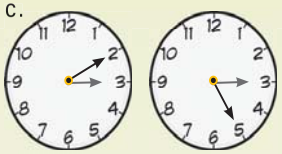
h. 10:40

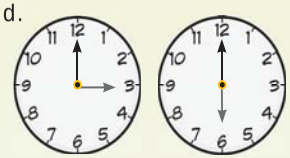
i 22:10

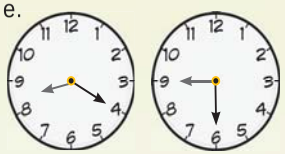
5. What is the duration from clock 1 to clock 2?

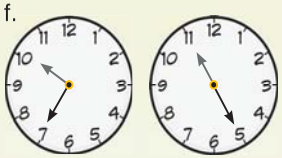
a.


b.


c.


d.


e.


f.


6. I left home at 06:45 and arrived at school at 07:25. How long did it take me to get there?

How many ...

... hours do you sleep each night? _____

... hours do you go to school each day? _____

... minutes do you take to eat your lunch? _____

... minutes do you take to get dressed in the morning? _____

19a More time

What is the time?

60 seconds = 1 minute

24 hours = 1 day

$365\frac{1}{4}$ = 1 year

12 months = 1 year

60 minutes = 1 hour

+/- 4 weeks = 1 month

7 days = 1 week

1. Answer these questions on seconds, minutes and hours.

a. The red hand on the clock shows us _____.

b. It takes _____ seconds to complete one circle.

c. _____ seconds = 1 minute.

d. The green hand on the clock shows us _____.

e. It takes _____ minutes to complete one circle.

f. _____ minutes = 1 hour.

g. The blue hand on the clock shows us _____.

h. It takes _____ hours to complete one circle.

i. _____ hours = one day, _____ hours = $\frac{1}{2}$ a day.

j. If the red hand moves from 12 to 1, it moves _____ seconds.

k. If the green hand moves from 12 to 2, it moves _____ minutes.

l. If the blue hand move from 12 to 5, it moves _____ hours.

2. Complete the following:

a.

Minutes	1	2	3	4
Seconds	60			

b.

Hours	1	2	3	4
Minutes				

c.

Day	1	2	3	4
Hours				

3. Complete the questions on days, weeks, months and years.

a. Complete the table below filling in the number of days in each month.

Month	January	February	March	April	May	June	July	August	September	October	November	December
Days												

b. Will February always have the same number of days? _____ Why or why not?

_____

c. Complete the table and then answer the questions below.

Month	January	February	March	April	May	June	July	August	September	October	November	December	Total
Days													
Days left													

i. How many months are there in a year? _____

ii. How many days are there in a year? _____

iii. Will we have the same number of days each year? _____

Why or why not? _____

Note that the number of days left depends on when you do this.

Calendar art

Make a calendar for the month of your birth.

Decorate it with a photograph or a drawing of yourself.

Give it to someone special.

continued ☛

19b Calculation of time

Look at the month of April and complete the table.

April 2015						
Sun	Mon	Tues	Wed	Thurs	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	24
26	27	28	29	30		

Dates from __ to ___	Number of days
1 – 15 April	
7 – 11 April	
10 – 13 April	
27 – 30 April	
20 – 25 April	

1. Use the June and July calendar to fill in the table below.

June 2015						
Sun	Mon	Tues	Wed	Thur	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

July 2015						
Sun	Mon	Tues	Wed	Thur	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Dates	Number of days	Name of starting day	What will the name of the next day after the last date be?
a. 25 June – 29 June			
b. 27 June – 2 July			
c. 24 June – 1 July			
d. 30 June – 3 July			
e. 16 June – 2 August			

2. Look at the December calendar and answer the questions.

December 2015						
Sun	Mon	Tues	Wed	Thur	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

a. On what day is New Year's Day?

b. What happens in South Africa if a public holiday is on a Sunday?

c. How many days is it from Christmas to New Year's Day?

d. On what day did the school start this year? How many days ago was it?

3. Complete the calendar for the month your birthday is in.

Sun	Mon	Tues	Wed	Thur	Fri	Sat

Count the days

How many days will it be from 23 February to 12 July? Will it be the same for every year?

Write your name as a code.

Decode. What is my name?

22 5 **18** 15 **14** 9 **3** **1**

A	B	C	D	E	F	G	H	I	J	K	L	M
1	2	3	4	5	6	7	8	9	10	11	12	13
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
14	15	16	17	18	19	20	21	22	23	24	25	26

1. Complete the following:

a. Write down your name. _____

b. How many letters do you have in your name? _____

c. Write down a friend's name. _____

d. How many letters does her or his name have? _____

Names in my class

Peter	Palesa	Sue	Thabo	Jabu
Gugu	Jonathan	Ann	Musa	Zander
Liesel	William	Jolene	Sipho	Lucy
Veronica	John	Lee	Sam	Nomsa
Mpho	Andile	Steven	Mbali	Bongi

2. Use the table above to complete this table.

Names with ____ letters	Tally
3	////
4	
5	
6	
7	
8	

3. Answer the questions using your tally.

a. How many children have 6 letters in their name?

_____

b. How many children have 4 letters in their name?

_____

c. How many children have 7 letters in their name?

_____

d. How many children have 8 letters in their name?

_____

e. What number of letters in a name is the most popular?

_____

f. Do you know a nine or more letter name? Write it down.

_____

g. Who in your class uses a shortened version of his or her name?

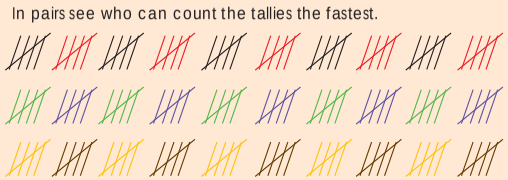
_____

h. Why do you think people sometimes rather use a 3 letter name like Sam and not Samantha?

_____

Tally competition ...

In pairs see who can count the tallies the fastest.



21a Pictographs and bar graphs

What is a pictograph?

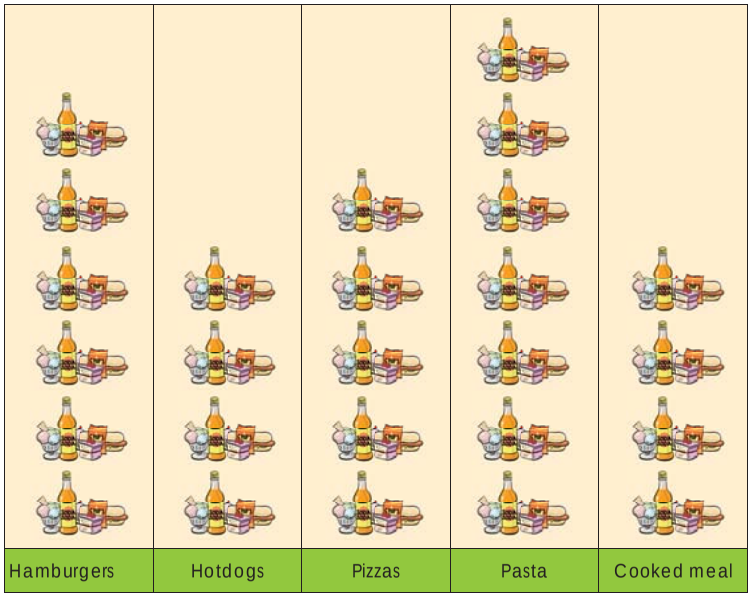
A Pictograph is a way of showing data using pictures. Each picture is a symbol of (a certain number of) the physical objects being counted.

1. In the pictograph below, what does each represent? How do you know?

2. Draw the key of this graph.

KEY:

Our class's favorite food



3. Draw a pictograph to represent the following information.

In our science class, our task was to go and search for insects in our gardens in order to see what insects there are at this time of year. I found the following in a section of 2 square metres in my garden:10 rose beetles, one ladybird, three bees, two flies, nine ants and six caterpillars.

4. Based on the above graph:

a. What time of year do you think it might be? (During which season(s) might certain insects be found generally?)

b. If I looked in a section of 4 square metres, more or less how many of each kind of insect could I expect to find?

c. Do you think I was looking at a patch of lawn or a flower bed? Why?

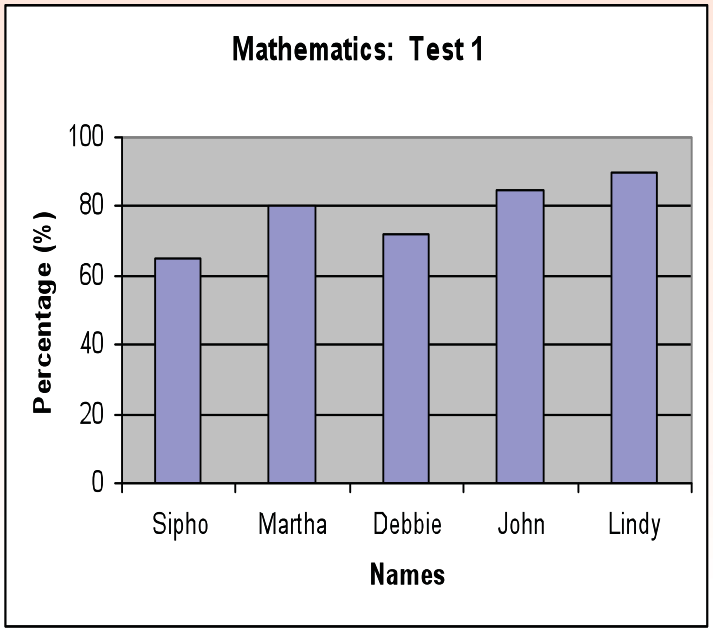
5. Suggest some data that would be easy and interesting to see/read in a pictograph (rather than in a bar graph).

6. Who might be interested in the graph you've suggested above, and why?

Pictographs and bar graphs continued

7. Every bar graph should have at least three labels. What are they?

8. What is this a graph of? How do you know?



9. Draw a bar graph of this information.

Our class voted for our class representative on the LRC, and the following learners each got the following number of votes:

Sifiso: 8
Nontobeko: 17
Jannie: 5
Faith: 10
Shelly: 9

10. According to your graph:

a. How many learners voted?

b. Who won?

c. Would you say that the winner won 'by a landslide' (by a big majority)? Explain your answer.

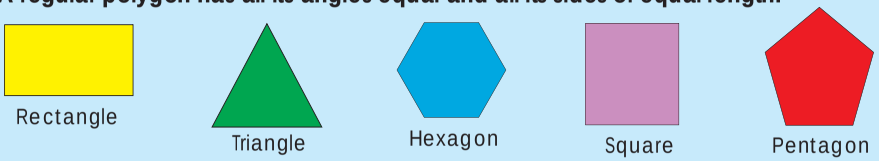
Democracy in the classroom

You are the 'manager' of the class representative election winner. Make a poster for the classroom, letting everyone know who won and by how much. Use a graph on the poster. It must be an eye-catching poster that shows how proud the whole class are about having elected their new class representative.

Evaluate each other's posters. Look especially at how the graphs were used – were they used creatively to help make the class and winner look really good?

22a 2-D shapes

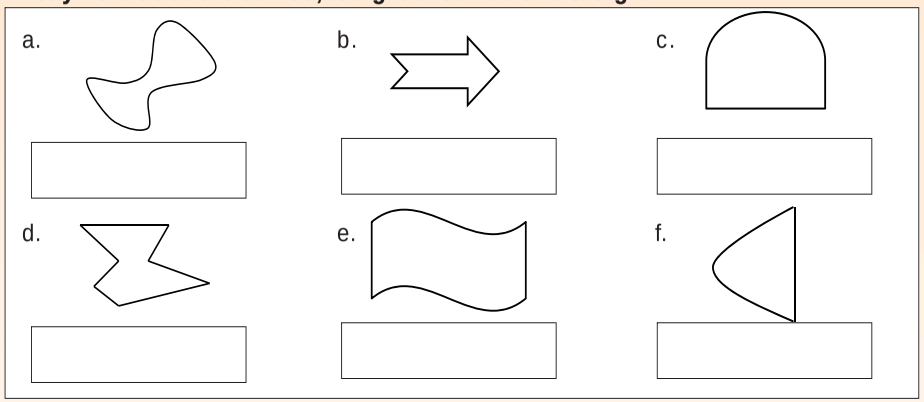
A polygon is a shape formed by three or more straight lines. Identify the polygons.
A regular polygon has all its angles equal and all its sides of equal length.



1. Draw a:

a. Straight line	b. Curved line

2. Say if the sides are curved, straight or curved and straight.

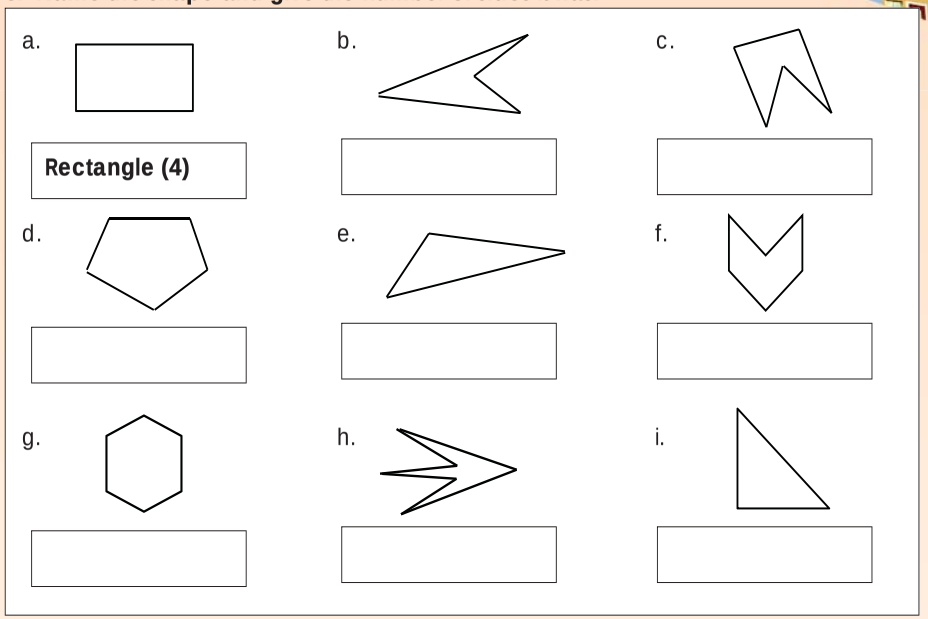


3. Draw the following on the grid below:

a. A shape with only **curved** sides.
b. A shape with **straight** and **curved** sides.
c. A shape with **straight** sides only.

4. Can a shape have three straight sides and one curved side?

5. Name the shape and give the number of sides it has.



6. Draw the following on the grid below:

a. Triangle
b. Quadrilateral
c. Pentagon
d. Hexagon

continued ☛

22b 2-D shapes continued

7. Draw the following shapes. All their sides must be equal.

a. triangle

b. square

c. pentagon

d. hexagon

e. quadrilateral

f. polygon of your choice

8. Draw a polygon with 10 equal sides.

9. Draw the following shapes. Their sides must be unequal.

a. triangle

b. octagon

c. pentagon

d. hexagon

e. quadrilateral

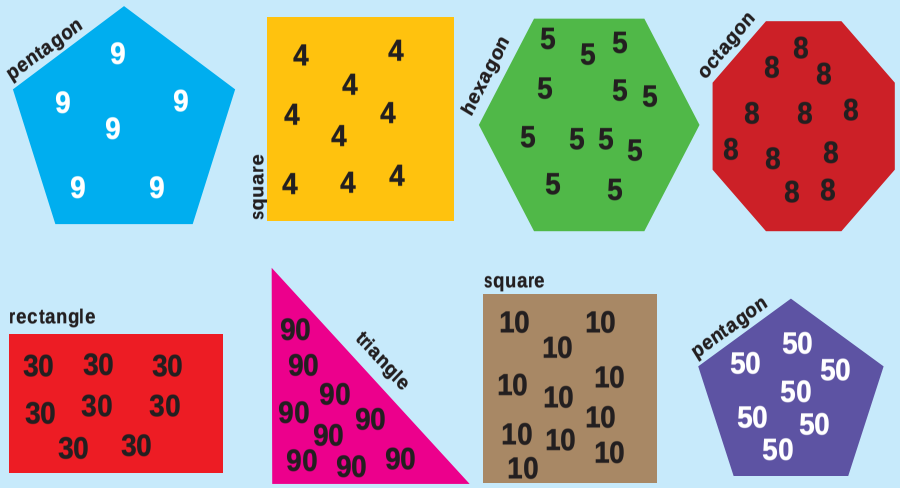
f. polygon of your choice

Sign:

Date:

23a Multiplication: 1-digit by 2-digit and 2-digit by 2-digit

Give the total of the numbers in each shape. Use multiplication.

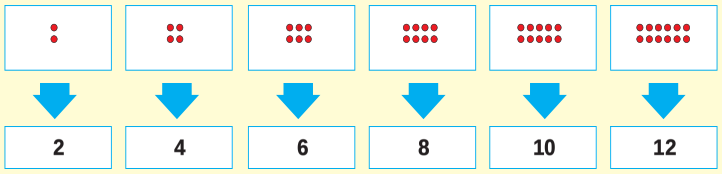


1. Complete the table below.

Number	x 10	x 20	x 30	x 40	X 50
4					
5					
7					
8					
9					
10					
20					
30					
40					
50					

2. Find the multiples. The example below will help you to complete the other tables.

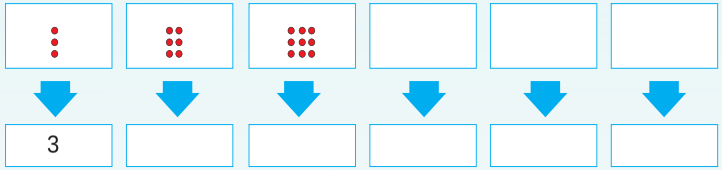
Multiples of 2



The multiples of 2 are 2, 4, 6, 8, 10, 12, ____, ____, ____, ____, ____, ____

a.

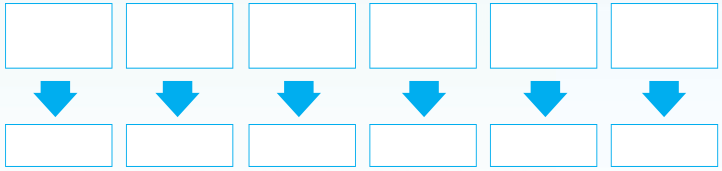
Multiples of 3



The multiples of 3 are 3, 6, 9, ____, ____, ____, ____, ____, ____

b.

Multiples of 5



The multiples of 5 are ____, ____, ____, ____, ____, ____, ____, ____

continued ☛

Multiplication: 1-digit by 2-digit and 2-digit by 2-digit continued

c.

Multiples of 10

10 x 1	10 x 2	10 x 3	10 x 4	10 x 5
10	20	30		

10 x 6	10 x 7	10 x 8	10 x 9	10 x 10

The multiples of 10 are ____, ____, ____, ____, ____, ____

3. Are these multiples of (extend the pattern):

a. **10?** 50, 60, 70, 80, ____ ____ ____ ____ ____

b. **20?** 260, 280, 300, 320, ____ ____ ____ ____ ____

c. **40?** 160, 200, 240, 280, ____ ____ ____ ____ ____

d. **100?** 200, 300, 400, 500, ____ ____ ____ ____ ____

e. **90?** 180, 270, 360, 450, ____ ____ ____ ____ ____

4. Use the method below to calculate the multiplication sums. Write the steps in your workbook.

Example:

16 x 7

10 6 7

= (10 + 6) x 7
= (10 x 7) + (6 x 7)
= 70 + 42
= 70 + 40 + 2
= 110 +2
= 112

a. 14 x 6

= ____
= ____
= ____
= ____
= ____
= ____

b. 25 x 3

= ____
= ____
= ____
= ____
= ____
= ____

c. 37 x 8

= ____
= ____
= ____
= ____
= ____
= ____

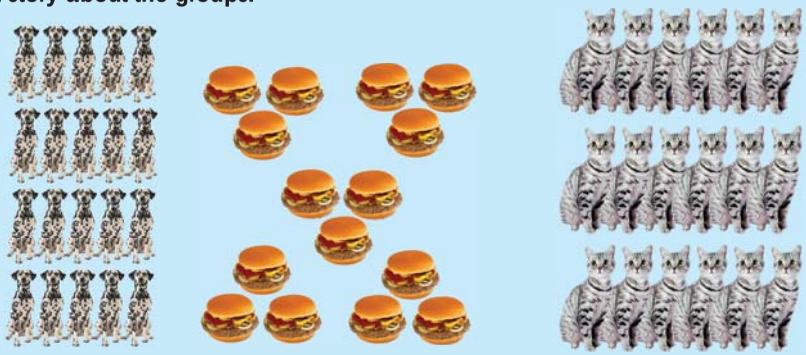
How fast are you?

What to do:
- The aim is to see how fast you can fill in the answers in the white rectangles.
- Multiply each colour number on the circle by the same colour rectangle's to get your answer.

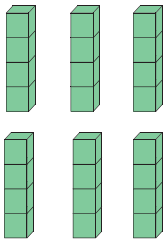
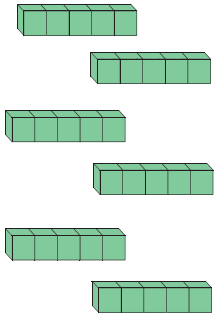
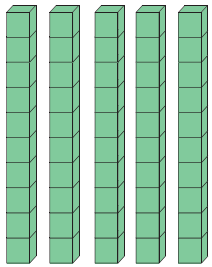
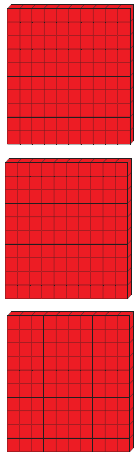
30		80	
10		40	
50		40	
20		90	
90		30	
50		50	
20		10	
30		9	
60		20	
80		60	

24a Grouping problems

Tell a story about the groups.



1. How many groups are there?

☐ groups of ☐	☐ groups of ☐	☐ groups of ☐	☐ groups of ☐
			
Addition sum:	Addition sum:	Addition sum:	Addition sum:
Multiplication sum:	Multiplication sum:	Multiplication sum:	Multiplication sum:
Division sum:	Division sum:	Division sum:	Division sum:

2. Complete drawings and multiplication and division sums of the following:

4 groups of each	5 groups of 2 each	6 groups of 2 each
Multiplication sum: 4 x 2 = 8	Multiplication sum:	Multiplication sum:
8 shared between 4	8 shared between 4	8 shared between 4
Division sum: 8 ÷ 2 = 4	Division sum:	Division sum:
4 groups of 10 each	2 groups of 100 each	6 groups of 100 each
Multiplication sum:	Multiplication sum:	Multiplication sum:
40 shared between 4	200 shared between 2	600 shared between 6
Division sum:	Division sum:	Division sum:

continued ☛

Grouping problems continued

Example 1:
84 ÷ 4

Let us write it as 4 x ☐ = 84

You can say 4 x 20 = 80. You still need 4
4 x 21 = 84
So 84 ÷ 4 = 21

3. Calculate the following:

a. 37 ÷ 3 =

b. 98 ÷ 5 =

c. 88 ÷ 4 =

d. 65 ÷ 5 =

e. 39 ÷ 3 =

f. 78 ÷ 6 =

Example 2:
75 ÷ 4
(70 + 5) ÷ 4
= (70 ÷ 4) + (5 ÷ 4)
= (17 rem 2) + (5 ÷ 4)
= 17 + (7 ÷ 4)
= 17 + 1 rem 3
= 18 rem 3

4. Calculate the following:

a. 37 ÷ 3 =

b. 98 ÷ 5 =

c. 89 ÷ 4 =

d. 67 ÷ 5 =

e. 38 ÷ 3 =

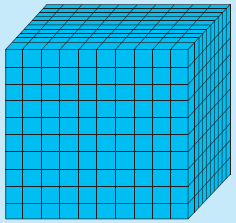
f. 79 ÷ 6 =

Sweet money ...

a. I have 97 sweets. I need to divide it amongst 5 children. How many sweets will be left over?
b. I have R95. How many cup cakes of R8 can I buy? Will I get any change?
c. My mother bought 80 metres of fabric to make scatter cushions for 9 people. How much fabric will she have for each person?

25 Numbers 0 to 2 000

How many of these blocks do you need in order to get a total of 2 000 small cubes?



1. Complete the following:

a. 1 000 + 500 + 90 + 3 = 1593	1 000	500	90	3
b. 1 000 + 900 + 10 + 6 = _____	1 000	900	10	6
c. 1 000 + 200 + 9 = _____	1 000	200		9
d. 1 000 + 30 + 5 = _____	1 000		30	5
e. 1 000 + 2 = _____	1 000			2

2. Write the number in the correct column:

		Thousands	Hundreds	Tens	Units
a.	1 234				
b.	948				
c.	1 028				
d.	1 607				
e.	1 060				

3. Write the numbers in question 2 in words.

4. Complete the following using the first question to guide you.

a. 1 456 = 1 thousand + 4 hundreds + 5 tens + 6 units

b. 1 234 = _____

c. 1 845 = _____

d. 1 304 = _____

e. 1 003 = _____

More numbers 0 to 2 000

1. Arrange the numbers from the smallest to the biggest.

a. 1 231 , 1 213 , 1 312 , 1 132 , 1 123, _____

b.1 945 , 1 549 , 1 559 , 1 954 , 1 459 , _____

c. 1 436 , 1 346 , 1 634 , 1 364 , 1 654 , _____

d. 1 050 , 1 005 , 1 500 , 1 505 , 1 055 , _____

e. 1 414 , 1 441 , 1 411 , 1 144 , 1 444 , _____

2. Fill in < or >.

a. 589 [<] 598

b. 948 [ ] 849

c. 1 030 [ ] 1 003

d. 1 540 [ ] 1 504

e. 1 418 [ ] 1 518

f. 1 356 [ ] 1 299

g. 1 988 [ ] 1 898

h. 1 767 [ ] 1 766

i. 1 847 [ ] 1 784

j. 1 414 [ ] 1 441

3. What is the value of the underlined digit?

a. 84<u>9</u> _____

b. <u>1</u> 954 _____

c. 1 <u>4</u>89 _____

d. 1 <u>7</u>77 _____

e. 1 8<u>4</u>1 _____

f. <u>1</u> 847 _____

4. Complete the following:

3 9 2 6

a. Use each digit once, make the smallest 4-digit number: _____

b. Use each digit once, make the largest 4-digit number: _____

c. You can use one digit twice, make the smallest 4-digit number: _____

d. You can use one digit twice, make the largest 4-digit number: _____

Find the matching card and colour it the same colour. We did the first one for you.

tens	units
4	7

thousands	units
4	7

hundreds	tens
4	7

hundreds	units
4	7

thousands	hundreds
4	7

4 700 | 47 | 407 | 4 007 | 470

27 More rounding off to the nearest 10

Draw a:
- **circle** around the number that will help you to round off to the nearest **ten**.
- **square** around the number that will change when you round off to the nearest ten.

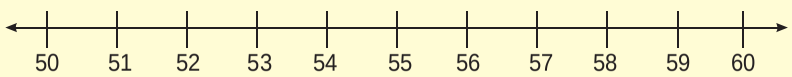
7 8 3 6 9

2 4 1 5 What do you notice?

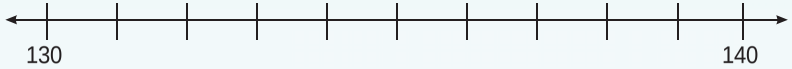
Why do you think we round off numbers?

1. Complete the sentences and round the numbers off to the nearest ten using the number lines.

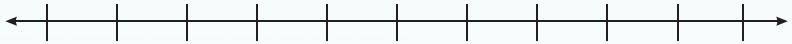
a. **56** is closer to 60 than 50. So 56 rounded off to the nearest **ten** is ____.



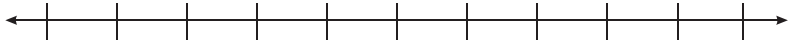
b. **136** is closer to ____ than ____. So 136 rounded off to the nearest **ten** is ____.



c. **284** is closer to ____ than ____. So 284 rounded off to the nearest **ten** is ____.



d. **1 799** is closer to ____ than ____. So 1 799 rounded off to the nearest **ten** is ____.

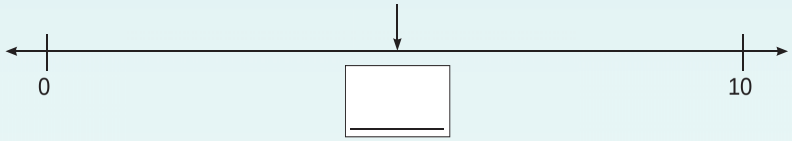


2. Round off each of the following numbers to the nearest 10:

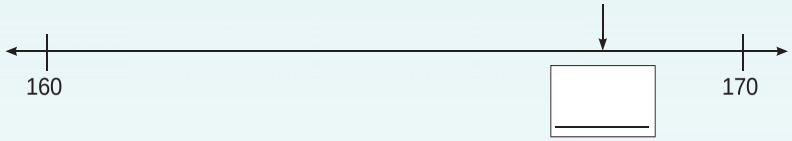
a) 15 ≈ ____ b) 431 ≈ ____ c) 9 672 ≈ ____

3. Estimate the position of the arrow on the number line.

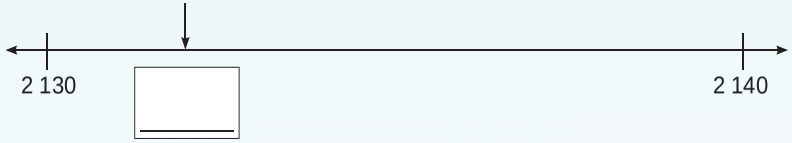
a)



b)



c)



4. Circle the number which you look at when deciding whether to round up or down to the nearest 10. Underline the number which you look at to tell you what ten you will round up or down to.

a) 59 b) 734 c) 1 665

Rounding off ...

Create a picture which explains to somebody who does not understand the concept of "rounding off". (For example, if you are walking from ... to ..., and it starts to rain, which place is closer?) Remember to show very carefully the point at which you start rounding off in the opposite direction.

Term 2

28 More rounding off to the nearest 100

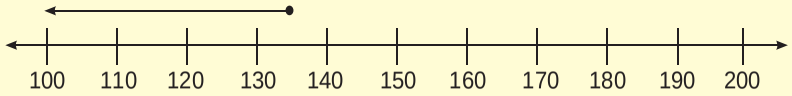
Draw a:
- **circle** around the number that will help you to round off to the nearest **hundred**.
- **square** around the number that will change when you round off to the nearest hundred.

2 3 5 4 5 8

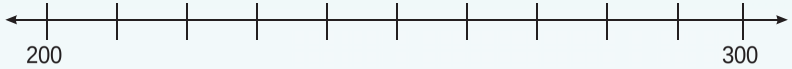
2 3 2 9 What do you notice?

1. Complete the sentences and round the numbers off to the nearest hundred using the number lines.

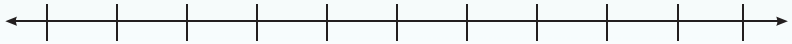
a. **137** is closer to 100 than 200. So 137 rounded off to the nearest **hundred** is ____.



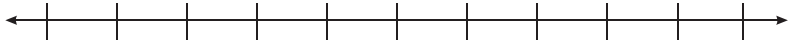
b. **258** is closer to ____ than ____. So 258 rounded off to the nearest **hundred** is ____.



c. **8 457** is closer to ____ than ____. So 8 457 rounded off to the nearest **hundred** is ____.



d. **2 199** is closer to ____ than ____. So 2 199 rounded off to the nearest **hundred** is ____.

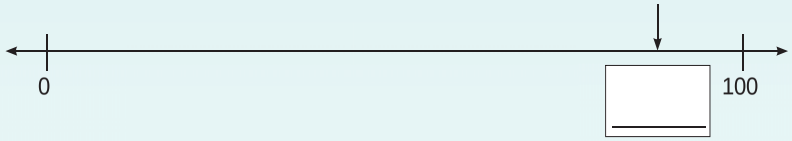


2. Round off each of the following numbers to the nearest 100:

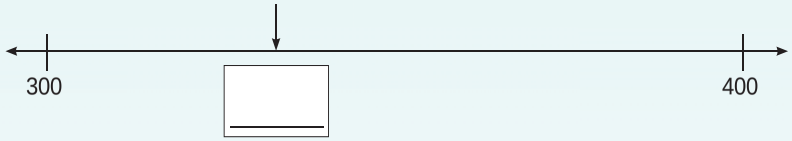
a) 679 ≈ ____ b) 1 202 ≈ ____ c) 1 681 ≈ ____

3. Estimate the position of the arrow on the number line.

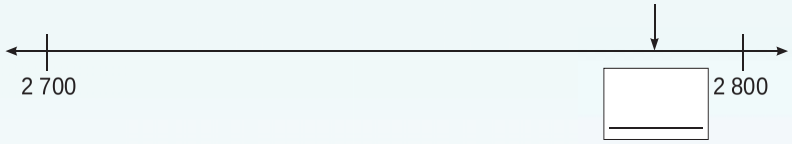
a)



b)



c)



4. Circle the number which you look at when deciding whether to round up or down to the nearest 100. Underline the number which you look at to tell you what ten you will round up or down to.

a) 599 b) 2 743 c) 8 982

More rounding off

What does it mean to round of to the nearest:
- rand
- centimetre

29 More number sentences

Quick recall.

28 + ___ = 30	72 + ___ = 80	56 + ___ = 60	54 + ___ = 60
42 + ___ = 50	37 + ___ = 40	91 + ___ = 100	62 + ___ = 80
95 + ___ = 100	27 + ___ = 50	51 + ___ = 100	61 + ___ = 90
36 + ___ = 50	25 + ___ = 50	38 + ___ = 70	21 + ___ = 50
17 + ___ = 50	29 + ___ = 80	55 + ___ = 90	17 + ___ = 100

1. Fill in the missing number.

a. 46 + ___ = 50 b. 15 + ___ = 20
c. 23 + ___ = 30 d. 29 + ___ = 40
e. 55 + ___ = 60 f. 74 + ___ = 80
g. 86 + ___ = 90 h. 45 + ___ = 60
i. 91 + ___ = 100 j. 75 + ___ = 100

2. Fill in the missing number.

a. 45 + ___ = 100 b. 32 + ___ = 50
c. 51 + ___ = 80 d. 56 + ___ = 90
e. 15 + ___ = 50 f. 95 + ___ = 120
g. 69 + ___ = 100 h. 44 + ___ = 150
i. 75 + ___ = 150 j. 31 + ___ = 120

3. Fill in the missing number.

a. 122 + ___ = 150 b. 102 + ___ = 150
c. 135 + ___ = 180 d. 141 + ___ = 200
e. 156 + ___ = 200 f. 115 + ___ = 200
g. 120 + ___ = 250 h. 200 + ___ = 325
i. 215 + ___ = 320 j. 250 + ___ = 550

4. Fill in the missing number.

a. 540 + ___ = 600 b. 230 + ___ = 500
c. 650 + ___ = 1 000 d. 320 + ___ = 1000
e. 880 + ___ = 1 000 f. 470 + ___ = 800
g. 550 + ___ = 1 000 h. 600 + ___ = 850
i. 490 + ___ = 1 000 j. 500 + ___ = 890

5. Fill in the missing number.

a. 1 560 + ___ = 1 700 b. 1 250 + ___ = 1 500
c. 1 380 + ___ = 1 500 d. 1 820 + ___ = 1 900
e. 1 190 + ___ = 1 500 f. 1 080 + ___ = 1 500
g. 1 230 + ___ = 1 800 h. 1 500 + ___ = 1 980
i. 1 370 + ___ = 1 500 j. 1 400 + ___ = 2 000

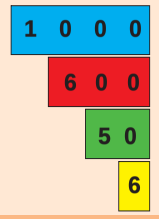
6. Fill in the missing number.

a. 1 733 + ___ = 1 800 b. 1 256 + ___ = 1 500
c. 1 612 + ___ = 1 800 d. 1 347 + ___ = 1 400
e. 1 431 + ___ = 1 600 f. 1 677 + ___ = 2 000
g. 1 697 + ___ = 2 000 h. 1 244 + ___ = 2 000
i. 1 009 + ___ = 1 500 j. 1 314 + ___ = 2 000

Number card fun ....

In this game we will only play with the 1 000 flard card, not 2 000 to 9 000.

What you need:
Number (flard) cards.



What to do:
- Play in pairs.
- The first player chooses a one thousand card and then one of each: hundreds, tens and unit flard card, and displays them as a number.

- The first player that fills the number up to the nearest 2 000, gets a point.
- Do the same, but player two chooses the cards. Repeat five times.
- The player with the highest score is the winner.

30a Addition up to 4-digit numbers

What is the difference between the numbers?

850	900	950	1 000	1 050	1 100	1 150	1 200	1 250	1 300
203	303	403	503	603	703	803	903	10 03	1103
1 050	1 080	1 110	1 140	1 170	1 200	1 230	1 260	1 290	1 320
40	160	280	400	520	640	760	880	1 000	1 120
550	700	850	1 000	1 150	1 300	1 450	1 600	1750	1 900

1. What number comes next?

a. 1 000, 1 120, 1 240, _____

b. 900, 950, 1 000, _____

c. 150, 180, 210, _____

d. 207, 307, 407, _____

2. Complete the table:

Number	Add 10	Add 100	Add 1 000
808			
32			
450			
752			
990			

Example:

732 + 614

700	30	2	+	600	10	4

= 700 + 30 + 2 + 600 + 10 + 4

= 1 300 + 40 + 6

= 1 000 + 300 + 40 + 6

= 1 346

3. Use both methods above to calculate the following. Write down the steps.

a. 1 002 + 487 =

Continue on an extra sheet of paper.

b. 295 + 1 703 =

Continue on an extra sheet of paper.

c. 321 + 902 =

Continue on an extra sheet of paper.

d. 800 + 706 =

Continue on an extra sheet of paper.

e. 816 + 174 =

Continue on an extra sheet of paper.

f. 110 + 836 =

Continue on an extra sheet of paper.

continued ☛

Addition up to 4-digit numbers continued

4. Solve the following word problems.

a. There were 1 450 spectators at the game. Another 325 arrived. What was the total number of spectators who saw the game?

Continue on an extra sheet of paper.

b. Lindi walked 1 265 m on the first day. On the second day she was a bit tired and walked 650 m? How far did she walk in two days?

Continue on an extra sheet of paper.

5. Write an appropriate and interesting word sum for: 1 500 and 300. Solve it.

Continue on an extra sheet of paper.

What is the size of your number?

What you need:
- Use the 100s dice you made before (Cut-out 3).
- Piece of paper.

What to do:
- Individual game against a group or the class.
- Roll the 100s dice.
- Add the number landed on, to the first number on the blue card. Write your sum on a piece of paper.
- Do the same with the 2nd to the 5th number.

1 100
600
550
1 250
975

31 Adding by filling the tens

Which sum is easier to add? Why?

8 + 7 = ___ or 10 + 5 = ___

10 + 4 = ___ or 7 + 7 = ___

9 + 2 = ___ or 10 + 1 = ___

10 + 2 = ___ or 7 + 5 = ___

In one minute, how many combinations can you find that add up to 50?

1. Fill up the tens.

3 + 7	= 10	8 + 2	= 10
2 + 8	= 10	9 + 1	= 10
5 + 5	= 10	4 + 6	= 10
1 + 9	= 10	7 + 3	= 10
6 + 4	= 10	0 + 10	= 10

Are there more combinations that will add up to ten?

_____

_____

_____

_____

_____

a. 3 + ___ = ___ b. 5 + ___ = ___ c. 2 + ___ = ___

d. 6 + ___ = ___ e. 1 + ___ = ___ f. 7 + ___ = ___

g. 8 + ___ = ___ h. 9 + ___ = ___ i. 4 + ___ = ___

2. Fill up the tens.

Example:

37 + 3	= 40	25 + 5	= 30
14 + 6	= 20	68 + 2	= 70
79 + 1	= 80	43 + 7	= 50
56 + 4	= 60	84 + 6	= 90
92 + 8	= 100	36 + 4	= 40

Find another five combinations that will add up to 100.

_____

_____

_____

_____

_____

a. 32 + ___ = ___ b. 46 + ___ = ___ c. 54 + ___ = ___

d. 72 + ___ = ___ e. 78 + ___ = ___ f. 68 + ___ = ___

g. 15 + ___ = ___ h. 94 + ___ = ___ i. 83 + ___ = ___

3. Fill up the hundreds.

Example: 486

486 + 14 = 500

a. 368 b. 371 c. 684

d. 519 e. 225 f. 568

g. 274 h. 479 i. 383

4. Calculate the following:

Example:

Calculate 2 486 + 48

2 **486** + 48
= (2 **486** + **14**) – **14** + 48
= 2 500 + (48 – 14)
= 2 500 + 34
= 2 534

a. 3 526 + 97 = b. 6 537 + 84 = c. 4 833 + 95 =

d. 1 789 + 39 = e. 2 786 + 56 = f. 8 976 + 41 =

g. 4 324 + 98 = h. 8 159 + 62 = i. 6 847 + 73 =

The concert

7 894 people came to see a concert. There were 68 security guards. How many people were in the stadium?

Sign:

Date:

32a Subtraction up to 4-digit numbers

What is the difference between the numbers?

100	200	300	400	500	600	700	800	900	1 000
208	308	408	508	608	708	808	908	1 008	1 108
1 050	1 150	1 250	1 350	1 450	1 550	1 650	1 750	1 850	1 950
1 350	1 360	1 370	1 380	1 390	1 400	1 410	1 420	1 430	1 440
1 000	1 100	1 200	1 300	1 400	1 500	1 600	1 700	1 800	1 900

1. What number comes next?

a. 1 350, 1 300, 1 250, _____

b. 1 800, 1 700, 1 600, _____

c. 1 060 , 1 050, 1 040, _____

d. 990, 890, 790, _____

2. Complete the table:

Number	Subtract 10	Subtract 100	Subtract 1 000
1 847			
1 680			
1 020			
1 006			
1 955			

Examples:

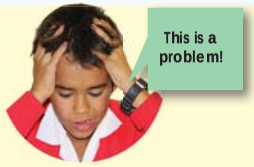
Example 1:

1 598 – 356

= (1 000) + (500 – 300) + (90 – 50) + (8 – 6)

= 1 000 + 200 + 40 + 2

= 1 242



Example 2:

1 642 – 1 268

= (1 000 – 1 000) + (600 – 200) + (40 – 60) + (2 – 8)

= 0 + 400 + (40 – 60) + (2 – 8)

= 0 + 400 + (30 – 60) + (12 – 8)

= 0 + 300 + (130 -60) + (12 – 8)

= 0 + 300 + 70 + 4

= 374

3. Use both methods to solve the subtraction sums.

a. 1 953 – 641

b. 1 784 – 933

Continue on an extra sheet of paper.

c. 1 988 – 1 259

d. 1 204 – 684 =

Continue on an extra sheet of paper.

continued ☛

Subtraction up to 4-digit numbers

continued

e. 1 743 – 1 399

Continue on an extra sheet of paper.

4. Solve the following word problems.

a. There are 785 apples at the fruit shop. They sell 83 apples. How many apples are left?

Continue on an extra sheet of paper.

b. Thabo had 2 000 litres of milk. He sold 256 litres of milk in the first week and 193 litres in the second week. How many litres did he sell altogether?

Continue on an extra sheet of paper.

–

What is the size of your number?

What you need:
- Use the 100s dice made before.
- Piece of paper.

What to do:
- Individual game against a group or the class.
- Roll the 100s dice.
- Subtract the number the dice landed on, from the first number on the blue card. Write your subtraction sum on a piece of paper.
- Do the same with the 2nd to the 5th number.

1 940
1 930
1 915
1 936
1 999

33 More subtraction up to 4-digit numbers

If you want to subtract the units from the units, the tens from the tens, the hundreds from the hundreds and the thousands from the thousands ,what will you do?

7 000	8	700
40	30	2 000
200	1	

1. Subtract the following:

a. 60 – 20 = _____ b. 5 – 2 = _____ c. 800 – 400 = _____

d. 600 – 400 = _____ e. 9 000 – 3 000 = _____ f. 700 – 100 = _____

g. 7 – 2 = _____ h. 70 – 30 = _____ i. 5 000 – 1 000 = _____

2. Subtract the following:

Example 1

320 – 180

= (300 + 20) – 100 – 80
= 200 + 20 – 80
= 100 + 120 – 80
= 100 + 40
= 140

a. 620 – 210 = b. 640 – 330 = c. 720 – 420 =

3. Round off the numbers to 1 000 and subtract it. Subtract the given numbers and compare the rounded off numbers answer with the given numbers answer.

Example 1:
4 687 – 2 143
Rounded off:
5 000 – 2000
3 000

Example 2:
Calculate 4 687 – 2 143.
4 687 – 2 143 = 4 000 + 600 + 80 + 7 – 2 000 – 100 – 40 – 3
= (4 000 – 2 000) + (600 – 100) + (80 – 40) + (7 – 3)
= 2 000 + 500 + 40 + 4
= 2 544

a. 3 857 – 2 436 = b. 7 576 – 5 125 = c. 5 387 – 4 263 =

4. Subtract the following:

Example: Breaking down all the numbers to be added using compensation (counterbalance).
Calculate: 8 743 – 5 684
8 743 – 5 684 = (8 000 + 700 + 40 + 3) – 5 000 – 600 – 80 – 4
= (8 000 + 600 + 130 + 13) – 5 000 – 600 – 80 – 4
= (8 000 – 5 000) + (600 – 600) + (130 – 80) + (13 – 4)
= 3 000 + 0 + 50 + 9
= 3 059

a. 3 568 – 1 689 = b. 7 485 – 3 597 = c. 5 883 – 3 995 =

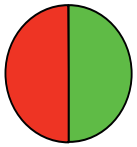
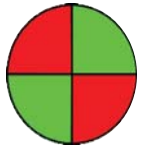
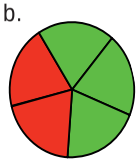
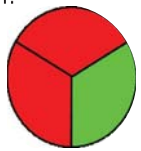
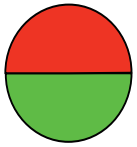
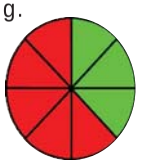
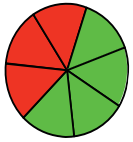
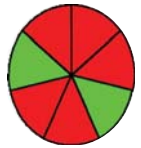
The cost of wheat

The price for a container of wheat is R8 231. Since some of the wheat is spoiled, the price is decreased by R3 789. What price does a shop owner pay for the container of wheat?

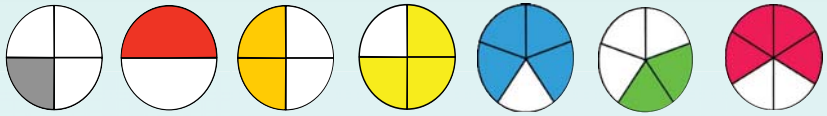
34 Compare and order common fractions

What fraction of the flowers is pink?

1. Complete the tables below.

Fraction circle	What fraction is red?	What fraction is green?	Fraction circle	What fraction is red?	What fraction is green?
a. 	$\frac{1}{2}$	$\frac{1}{2}$	e. 		
b. 			f. 		
c. 			g. 		
d. 			h. 		

2. Use the fraction circles to say if it is bigger than, smaller than or equal.

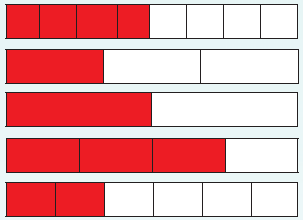


Fill in <,> or =

a. $\frac{4}{5}$ [>] $\frac{3}{4}$ b. $\frac{2}{5}$ [ ] $\frac{1}{4}$ c. $\frac{1}{2}$ [ ] $\frac{3}{4}$

d. $\frac{2}{4}$ [ ] $\frac{1}{2}$ e. $\frac{4}{5}$ [ ] $\frac{4}{6}$ f. $\frac{2}{4}$ [ ] $\frac{4}{6}$

3. Use the fraction strips to answer the questions. Fill in <,> or =



a. $\frac{4}{8}$ [ ] $\frac{1}{3}$ b. $\frac{2}{6}$ [ ] $\frac{1}{3}$

c. $\frac{1}{3}$ [ ] $\frac{1}{2}$ d. $\frac{2}{6}$ [ ] $\frac{4}{8}$

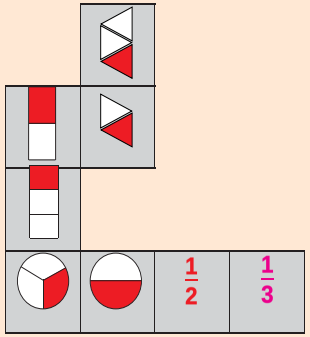
e. $\frac{1}{2}$ [ ] $\frac{4}{8}$ f. $\frac{3}{4}$ [ ] $\frac{4}{8}$

4. Which fraction comes next if I count forwards?

a. $\frac{1}{4}$ $\frac{2}{4}$ $\frac{3}{4}$ [$\frac{4}{4}$] b. $\frac{1}{6}$ $\frac{2}{6}$ $\frac{3}{6}$ [ ]

c. $\frac{2}{5}$ $\frac{3}{5}$ $\frac{4}{5}$ [ ] d. $\frac{4}{8}$ $\frac{5}{8}$ $\frac{6}{8}$ [ ]

Fraction Dominoes

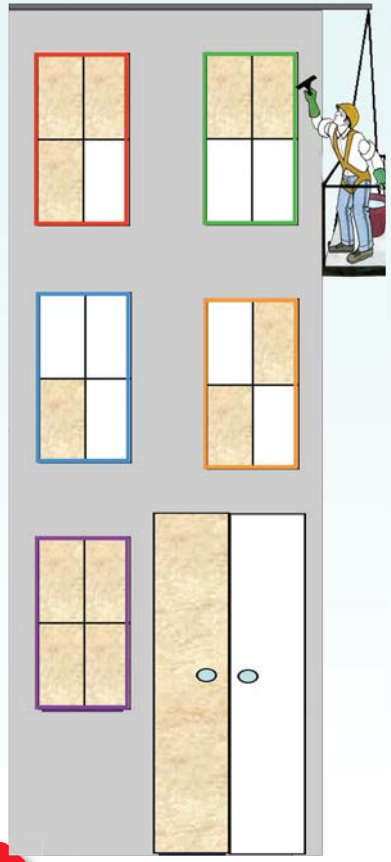


- Use Cut-out 6.
- After shuffling the dominoes, each player draws tiles to make up their hand. The number of tiles drawn depends on the number of players.
- The player with the largest fraction starts. Play proceeds to the left (clockwise). Each player adds a domino to an open end of the layout, if possible.
- A player who cannot make a move must pass. The game ends when one player uses the last domino in his or her hand, or when no more plays can be made. If all players still have tiles in their hand, but no more moves can be made, then the game is said to be "blocked".

Grouping and Sharing

Look at the picture below. Each child got 1 slice of pizza. What fraction of a pizza did each child get?

1. Look at the building and answer the questions.



a. What fraction of the red window is:

Washed? _____

Still dirty? _____

b. What fraction of the orange window is:

Washed? _____

Still dirty? _____

c. What fraction of the green window is:

Washed? _____

Still dirty? _____

d. What fraction of the purple window is:

Washed? _____

Still dirty? _____

e. What fraction of the blue window is:

Washed? _____

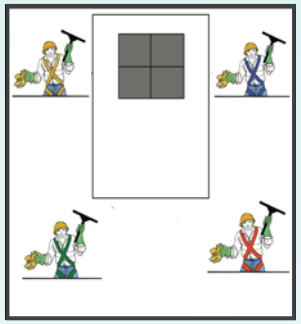
Still dirty? _____

f. What fraction of the door is:

Washed? _____

Still dirty? _____

2. Look at the pictures. All jobs are shared equally.

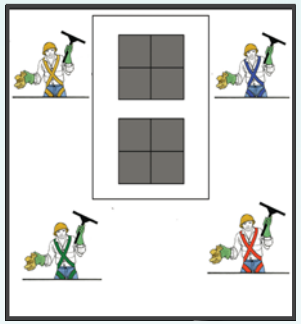


a. How many window panes will each person wash?

_____

b. What fraction of the window is this?

_____

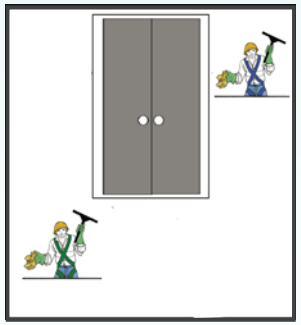


c. How many window panes will each person wash?

_____

d. What fraction of the windows is this?

_____



e. How much of the door will each person wash?

_____

f. What fraction of the door is this?

_____

Fraction Dominoes

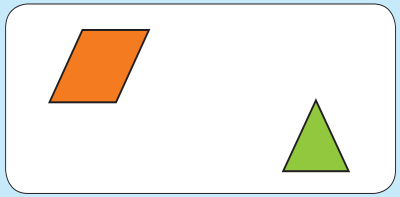
Play fraction dominoes.

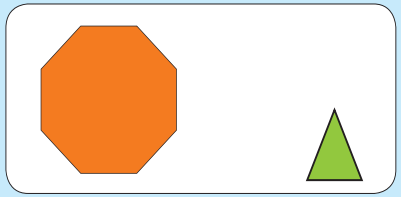
Sign:

Date:

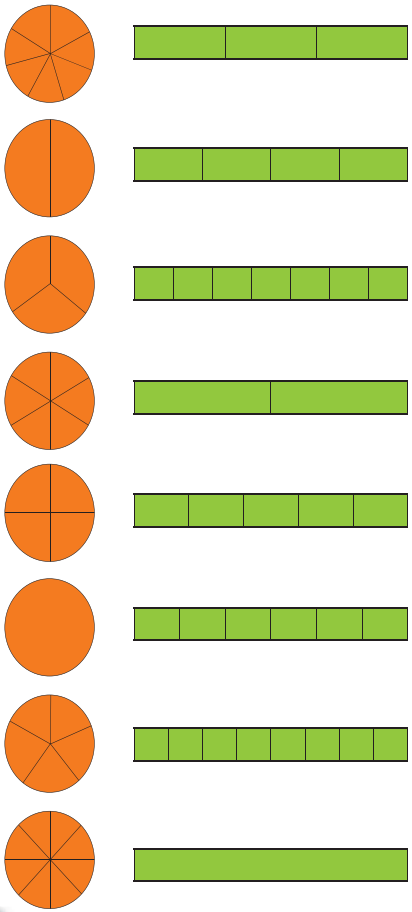
Fractions: halves to twelfths

How many triangles can you fit onto the orange shape?



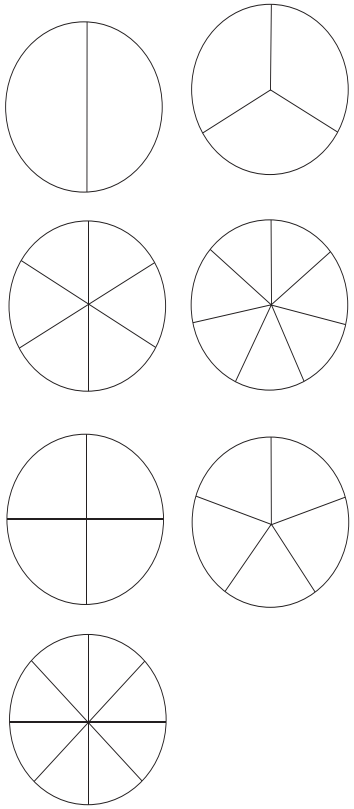


1. Match the fraction strip with the fraction circle on the left.

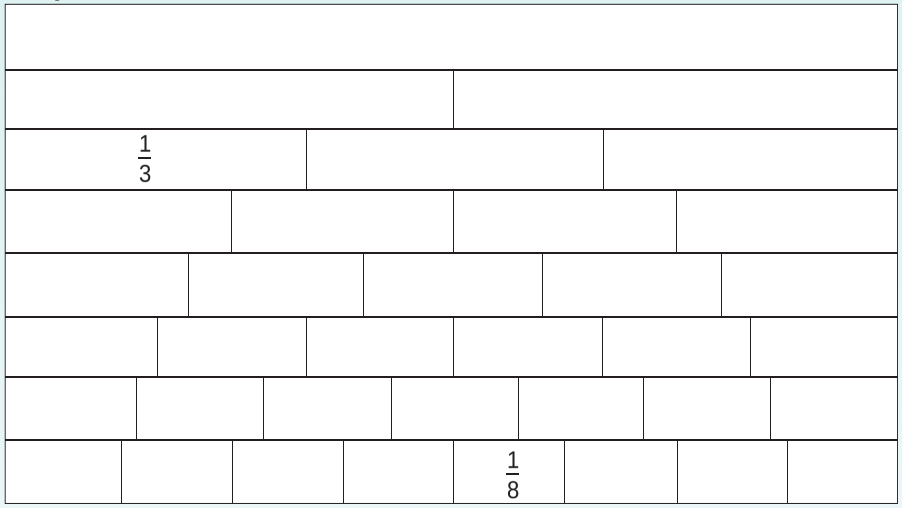


2. Find the fraction and colour in the following.

$\frac{3}{4}$ $\frac{4}{6}$ $\frac{2}{3}$ $\frac{1}{2}$ $\frac{3}{8}$ $\frac{6}{7}$ $\frac{2}{5}$



3. Write the fractions on the fraction diagram. We have done two examples for you.



4. Fill in <, >, or =. Use the fraction strips above to help you.

a. $\frac{1}{2}$ ☐ $\frac{1}{4}$ b. $\frac{1}{3}$ ☐ $\frac{1}{5}$ c. $\frac{1}{6}$ ☐ $\frac{1}{8}$ d. $\frac{1}{8}$ ☐ $\frac{1}{7}$

e. $\frac{1}{2}$ ☐ $\frac{2}{4}$ f. $\frac{2}{3}$ ☐ $\frac{5}{6}$ g. $\frac{3}{5}$ ☐ $\frac{3}{8}$ h. $\frac{2}{7}$ ☐ $\frac{1}{8}$

i. $\frac{4}{6}$ ☐ $\frac{2}{3}$ j. $\frac{5}{8}$ ☐ $\frac{2}{4}$ k. $\frac{3}{5}$ ☐ $\frac{1}{6}$ l. $\frac{1}{2}$ ☐ $\frac{7}{8}$

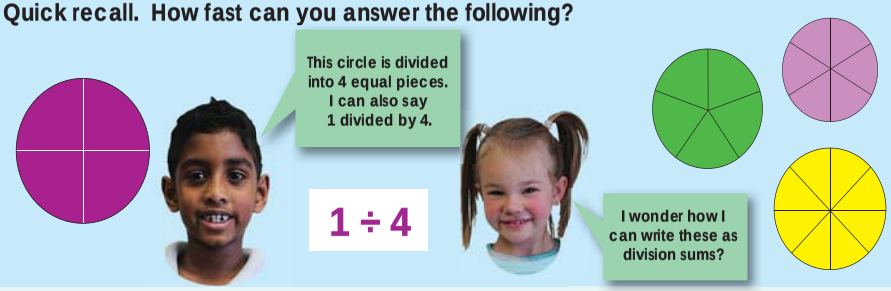
m. $\frac{3}{8}$ ☐ $\frac{2}{3}$ n. $\frac{4}{7}$ ☐ $\frac{4}{5}$ o. $\frac{4}{8}$ ☐ $\frac{1}{2}$ p. $\frac{1}{3}$ ☐ $\frac{2}{6}$

Fractions dice

- Use Cut-out 4.
- Throw the fraction dice.
- Then take a fraction strip that matches the fraction on the face of the dice. If the face is $\frac{1}{4}$, take a quarter strip.
- If you are correct keep the fraction strip.
- At the end count your fraction strips.
- The winner is the person with the most fractions strips.

Fractions and division

Quick recall. How fast can you answer the following?



1.

Fraction strip	Fraction pieces. Make your own drawing.	Write a division sum.
$\frac{1}{2}$		1 ÷ 2 =
$\frac{1}{3}$		
$\frac{1}{4}$		
$\frac{1}{5}$		
$\frac{1}{6}$		
$\frac{1}{7}$		
$\frac{1}{8}$		

2. Complete the table.

Fraction circle	Fraction	Division	Division sum in words
	halves	$1 \div 2 = \frac{1}{2}$	One circle divided by two equals two halves.

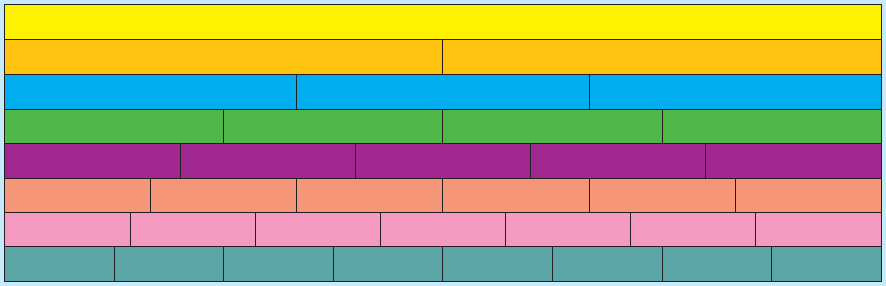
Fraction hunt ...

Find in magazines or draw fractions for:

2 ÷ 8 **3 ÷ 6** **2 ÷ 12**

Equivalent and Comparing Fractions

Write a fraction on each part.

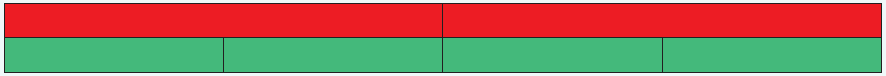


1. Use the fraction strips. Answer the questions below.

a. What fraction is smaller than $\frac{1}{2}$? $\frac{1}{3}$

b. What fraction is bigger than $\frac{1}{2}$? _____

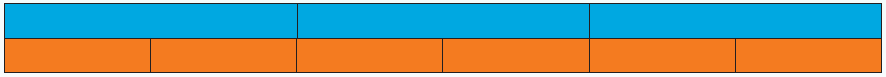
c. What fractions are smaller than $\frac{2}{3}$? _____



d. What fraction is smaller than $\frac{1}{2}$? _____

e. What fraction is bigger than $\frac{1}{2}$? _____

f. What fraction is equal $\frac{1}{2}$? _____



g. What fractions are smaller than $\frac{2}{3}$? _____

h. What fractions are bigger than $\frac{2}{3}$? _____

i. What fractions are smaller than $\frac{2}{6}$? _____

j. What fraction is equal $\frac{1}{3}$? _____

2. Look at the pictures and answer the questions.

a. Four cups = _____ ml.

b. Four cups = _____ litre.

c. One cup is _____ of a litre.

d. Two cups are _____ of a litre.

e. Three cups are _____ of a litre.

f. Four cups are _____ of a litre.

3. Fill in <, > or =

a. 3 cups _____ $\frac{1}{2}$ of a litre.

b. $\frac{1}{4}$ of a litre _____ 4 cups.

c. 4 cups _____ 1 litre.

d. 1 cup _____ $\frac{1}{4}$ of a litre.

e. 2 cups _____ 500 ml

f. 2 cups _____ $\frac{1}{4}$ of a litre.

Fraction Dominoes

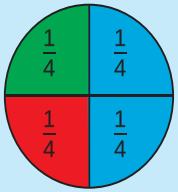
Play fraction dominoes.

Sign:

Date:

39 Common fractions

Discuss the following:



$\frac{1}{4}$ is green

$\frac{2}{4}$ is blue

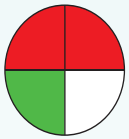
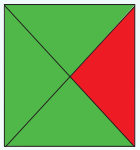
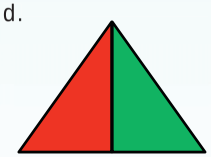
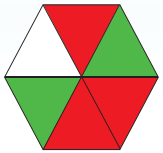
$\frac{1}{4}$ is red

$\frac{3}{4}$ is blue and red. Why?

1. Add the coloured parts on the fraction strips.

a.		$\frac{1}{3} + \frac{1}{3} = \frac{2}{3}$
b.		$\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} =$ ☐
c.		
d.		
e.		

2. Add the red and green parts of the diagram.

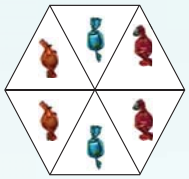
a.  ☐	b.  $\frac{3}{4} + \frac{1}{4} =$ ☐
c. ☐	d.  ☐
e.  ☐	f. ☐

3. What fraction of the sweets are orange and blue?

$\frac{1}{4} + \frac{1}{4} = \frac{2}{4}$

☐

☐



☐

4. Add the following:

a. $\frac{1}{4} + \frac{1}{4} =$ ☐

b. $\frac{3}{5} + \frac{1}{5} =$ ☐

c. $\frac{2}{6} + \frac{4}{6} =$ ☐

d. $\frac{2}{4} +$ ☐ $= \frac{3}{4}$

e. $\frac{4}{8} +$ ☐ $= \frac{6}{8}$

f. $\frac{1}{12} +$ ☐ $= \frac{11}{12}$

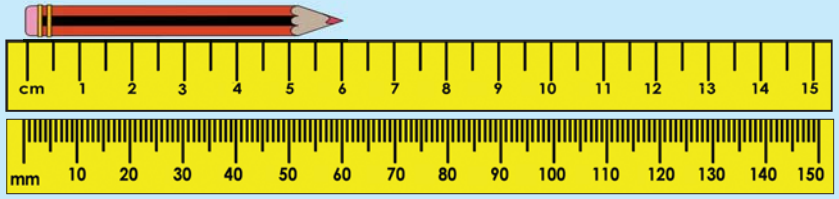
Eating chocolate

Susan eats two eights of a chocolate bar. How much is left over? Show your answer with a drawing.

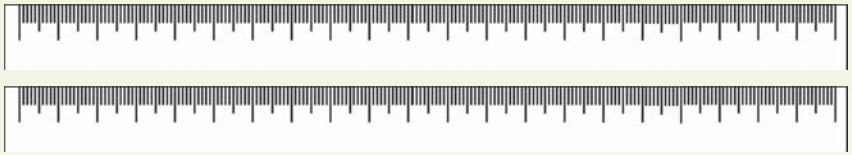
Length

Length – using your ruler.

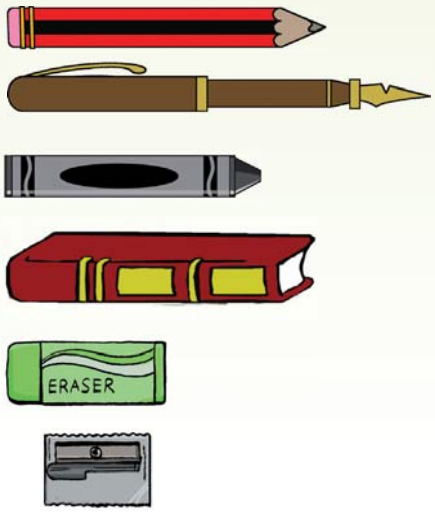
- The pencil starts at zero and measures 6 cm or 60 mm long.
- On the first ruler each cm is marked but there are unmarked divisions in between. What are they?
- On the second ruler each mm is marked.
- Each 10 mm makes 1 cm.



1. Label the first ruler in cm and the second one in mm.



2. Measure each object and give your answer in cm and mm. Order the objects from shortest to longest.



a. _____

b. _____

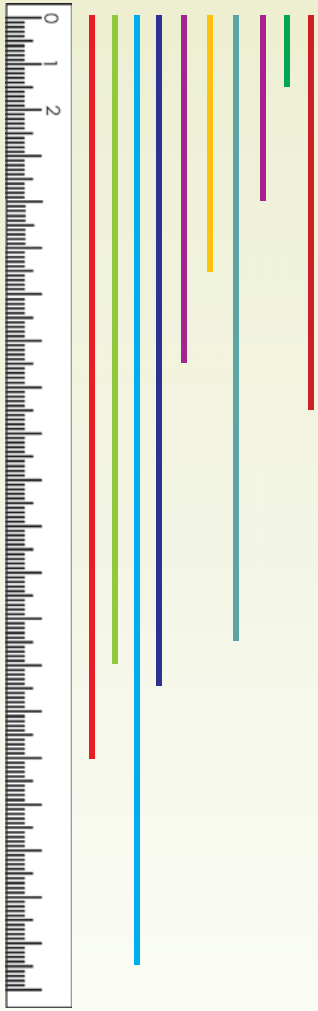
c. _____

d. _____

e. _____

f. _____

3. Complete the numbers on the ruler, measure the lines and complete the table.



	Answer in mm	Answer in cm

4. Answer the following:

Write your answers in mm and cm.

a. Which line is the longest?

_____

b. Which line is the shortest?

_____

One metre outing ...

Find 10 things that are 1 metre long.

41 Estimate, measure and compare length

Match the measuring instrument with the measuring unit

millimetres mm | centimetres cm | metres m

1. Estimate, measure and compare in millimetres.

	Estimate	Measure	Difference between estimation and measurement
a. Length of book			
b. Length of desk			
c. Width of desk			
d. Height of suitcase			
e. Length of suitcase			

2. Estimate, measure and compare in metres.

	Estimate	Measure	Difference between estimation and measurement
a. Length of class			
b. Width of class			
c. Length of teacher's desk			
d. Height of teacher's desk			
e. Length of any outside area			

3. If the object is shorter than 20 cm but longer than 10 cm, what could the object be?

4. What are the abbreviations for:

a. millimetre _____ b. centimetre _____ c. metre _____ d. kilometre _____

5. Give examples of objects that you would measure in:

a. mm _____ b. cm _____

c. m _____ d. km _____

6. Compare the following: Remember to state the measurement unit.

a. Two pencils of different lengths.	b. Two books of different lengths.	c. Two books of different widths.
d. The length of a sheet of paper with the length of a sheet of paper that is folded once.	e. The width of a sheet of paper with the width of a sheet of paper that is folded once.	f. The height and width of the door.
g. The length and width of your desk.	h. The length and width of the classroom.	i. The length and width of any outside area.

Length and width

What is the difference between the length and the width of any room in your house?

Term 2

42 Length conversions

Read the statements. Say what you would measure with: centimetres, metres or kilometres.

Length of a staple | Half length of a bed | The height of a five year old | Waist height of an adult | It will take 12 minutes to walk. | Five steps up a staircase | The thickness of a notebook

1. Convert the following to the other two measurement units.

a. 10 mm = _____ b. 100 cm = _____

c. 1 000 mm = _____ d. 1 000 m = _____

2. Write the following in cm and mm, and then as cm.

Example:
35 mm = 3 cm and 5 mm or 3 $\frac{1}{2}$ cm

a. 75 mm = _____ b. 65 mm = _____ c. 35 mm = _____

d. 15 mm = _____ e. 5 m = _____ f. 85 mm = _____

3. Write the following in mm.

Example:
3 $\frac{1}{2}$ cm = 35 mm

a. 4 cm and 3 mm _____ b. 6 $\frac{1}{2}$ cm _____ c. 7 cm and 8 mm _____

d. 9 $\frac{1}{2}$ cm _____ e. 5 cm and 9 mm _____ f. 18 $\frac{1}{2}$ cm _____

4. Write the following in m and cm.

Example:
26 cm = 5 m and 26 cm

a. 197 cm _____ b. 521 cm _____ c. 362 cm _____

d. 418 cm _____ e. 235 cm _____ f. 756 cm _____

5. Write the following as cm.

a. 1 m 42 cm **142** *cm* b. 5 m 24 cm _____ c. 4 m 69 cm _____

d. 6 m 31 cm _____ e. 2 m 13 cm _____ f. 7 m 88 cm _____

g. 3 m 55 cm _____ h. 9 m 76 cm _____ i. 8 m 97 cm _____

6. Write the following as km.

a. 3 500 m **3 km 500 m** b. 7 500 m _____ c. 8 900 m _____

d. 3 200 m _____ e. 6 100 m _____ f. 6 500 m _____

g. 8 500 m _____ h. 4 200 m _____ i. 3 800 m _____

7. Write the following as m.

a. 4 $\frac{1}{2}$ km **4 500 m** b. 9 $\frac{1}{2}$ km _____ c. 2 km 400 m _____

d. 7 km 800 m _____ e. 5 $\frac{1}{2}$ km _____ f. 6 km 300 m _____

g. 7 $\frac{1}{2}$ km _____ h. 9 km 200 m _____ i. 1 $\frac{1}{2}$ km _____

Distances

a. I travelled 4 $\frac{1}{2}$ km. My friend travelled 4 700 m. Who travelled the furthest?

b. I bought 5 700 mm of string and then 3 100 mm more. How much string did I buy? Write down your answer in mm and cm and then in m.

c. I bought 9 m of ribbon. I used 4 $\frac{1}{2}$ m. How much ribbon do I have left? Write your answer in m and cm.

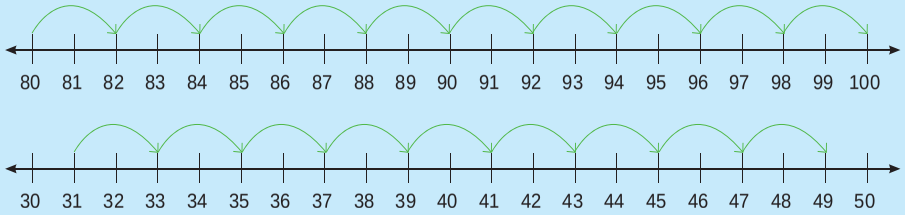
d. My father's desk is 2 200 mm long and mine measures 1 900 mm. How much longer is my father's desk? Write down your answer in mm and cm.

e. I bought 20 m of wool. I used 11 $\frac{1}{2}$ m. How much wool do I have left? Write your answer in m and cm.

Term 2

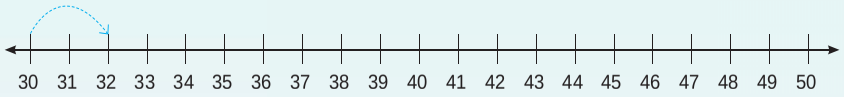
43 Multiples and rate

What are these number lines showing?



1. Show the multiples on the number lines.

2



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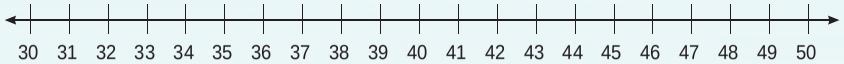

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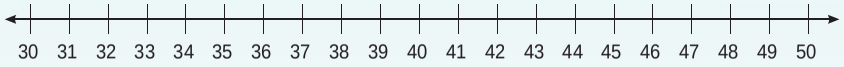

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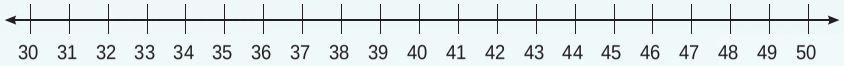

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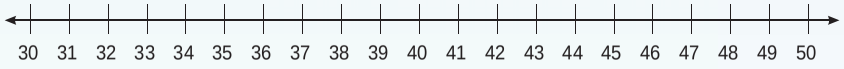

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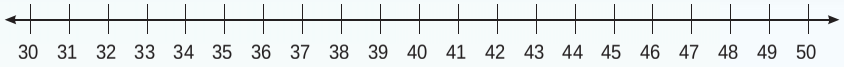

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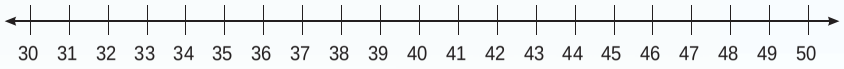

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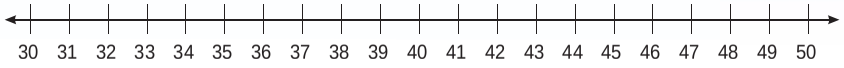
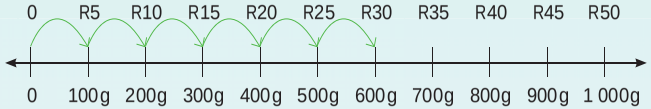


2. Solve the following by showing it on a number line.

R5/100 g

a. How much will 600 g of cheese cost?



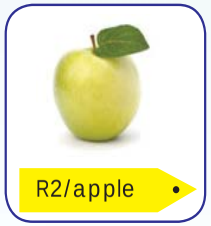
Number sentence: R5 x 6 = R30

R6/100 g

b. How much will 900 g viennas cost?

R7/100 g

c. How much will 1 000 g chicken cost?



R2/apple

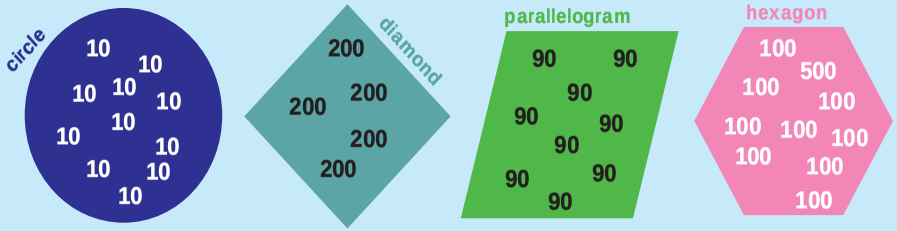
d. How how much will 12 apples cost?

Sugar

The mass of 10 bags of sugar is 300 kg. What is the mass of 1 bag of sugar?

Multiplication: 2-digits by 2-digits

Give the total of the numbers in each shape. Use multiplication.



1. Complete the table below.

Number	x 10	x 20	x 30	x 40	X 50
10					
20					
30					
40					
50					

2. Are these multiples of (extend the pattern):

a. **10?** 50, 60, 70, 80, ____ ____ ____ ____ ____

b. **20?** 260, 280, 300, 320, ____ ____ ____ ____ ____

c. **40?** 160, 200, 240, 280, ____ ____ ____ ____ ____

d. **100?** 200, 300, 400, 500, ____ ____ ____ ____ ____

e. **90?** 180, 270, 360, 450, ____ ____ ____ ____ ____

3. Use the method below to solve the multiplication sums on this and the next page.

Example:
11 x 12
= (10 + 1) x (10 + 2)
= (10 x 10) + (1 x 10) + (10 x 2) + (1 x 2)
= 100 + 10 + 20 + 2
= 100 + 30 + 2
= 132

a. 12 x 13 =

Continue on an extra sheet of paper.

b. 10 x 21 =

Continue on an extra sheet of paper. .

continued ☛

Multiplication: 2-digits by 2-digits

continued

c. 22 x 14 =

Continue on an extra sheet of paper.

d. 23 x 17 =

Continue on an extra sheet of paper.

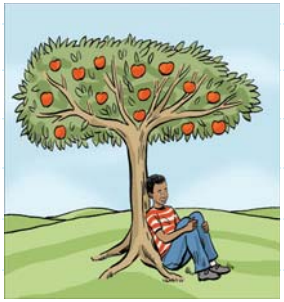
e. 19 x 22 =

Continue on an extra sheet of paper.

4. Solve the problem.

Each box has 42 apples. How many apples are there altogether in 12 boxes?

Show all calculations.



Continue on an extra sheet of paper.

How fast are you?

What to do:

- The aim is to see how fast you can fill in the answers in the white rectangles.
- Multiply each colour number on the circle by the same colour rectangle's to get your answer.

30		80	
10		40	
50		40	
200		90	
90		30	
50		50	
20		10	
30		9	
60		20	
80		60	

45a More multiplication: 2-digits by 2-digits

Give the total of the numbers in each shape. Use multiplication.

1. Complete the table below.

Number	x 10	x 20	x 30	x 40	x 50	x 60	x 70	x 80	x 90
8									
10									
12									
15									
20									

2. These are multiples of (extend the pattern):

a. **20:** 60, 80, 100, 120, ____ ____ ____ ____ ____

b. **50:** 150, 200, 250, 300, ____ ____ ____ ____ ____

c. **100:** 500, 600, 700, 800, ____ ____ ____ ____ ____

d. **200:** 200, 400, 600, 800, ____ ____ ____ ____ ____

e. **250:** 0, 250, 500, 750, ____ ____ ____ ____ ____

3. Use the method below to solve the sums.

Example:

48 x 36
= (40 + 8) x (30 + 6)
= (40 x 30) + (8 x 30) + (40 x 6) + (8 x 6)
= 1 200+ 240 + 240 + 48
= 1 000 + 200 + 200 + 200 + 40 + 40 + 40 +8
= 1 000 + 600 + 120 + 8
= 1 000 + 600 + 100 + 20 + 8
= 1 728

a. 23 x 54 =

Continue on an extra sheet of paper.

b. 28 x 62 =

Continue on an extra sheet of paper.

continued ☛

More multiplication: 2-digits by 2-digits

continued

c. 35 x 54 =

Continue on an extra sheet of paper.

d. 33 x 39 =

Continue on an extra sheet of paper.

e. 28 x 71 =

Continue on an extra sheet of paper.

4. There are 38 children in our class. Each child needs to pay R45 for their stationery. How much money must your teacher collect?

Continue on an extra sheet of paper.

How fast are you...

What to do:

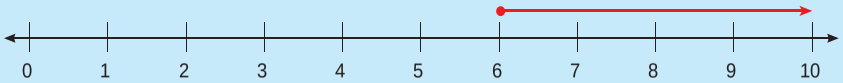
- The aim is to see how fast you can fill in the answers in the white rectangles.
- Multiply each number on the circle by the same colour rectangles to get your answer.

20		50	
30		40	
60		20	
60		10	
10		10	
90		70	
90		80	
50		40	
10		50	
80		50	

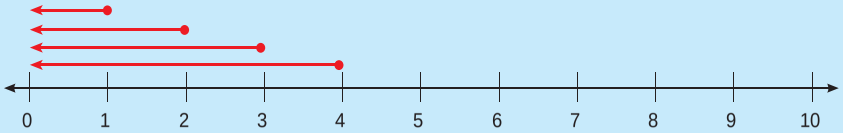
Multiplication and approximation

Revise rounding off to the nearest 10. Look at the number lines and describe them.

Round 6 off to the nearest ten.

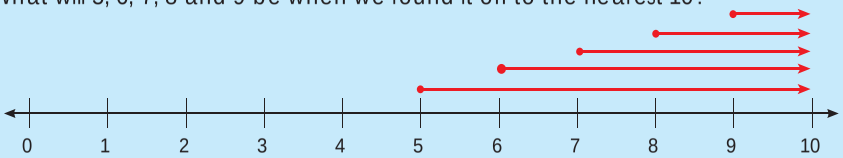


What will 1, 2, 3 and 4 be when we round it off to the nearest 10?



It will be zero.

What will 5, 6, 7, 8 and 9 be when we round it off to the nearest 10?



It will be ten.

1. Round the following off to the nearest ten.

a. 13		b. 42		c. 35	
d. 54		e. 21		f. 79	
g. 68		h. 97		i. 86	

2. Calculate these multiplication sums by approximating one or both of the numbers. Then multiply the numbers without approximation and compare the answers.

Example 1:

47 × 45
≈ 50 × 40 (by approximating the numbers)
≈ 2 000

47 x 45
= (40 + 7) x (40 + 5)
= (40 x 40) + (40 x 5) + (7 x 40) + (7 x 5)
= 1 600 + 200 + 280 + 35
= 1 000 + 600 + 200 + 200 + 80 + 30 + 5
= 1 000 + 1 000 + 110 + 5
= 2 000 + 115
= 2 115

Example 2:

47 × 45
≈ 50 × 45 (by approximating one number)
≈ 50 × (40 + 5)
≈ (50 × 40) + (50 × 5)
≈ 2 000 + 250
≈ 2 250

47 x 45
= (40 + 7) x (40 + 5)
= (40 x 40) + (40 x 5) + (7 x 40) + (7 x 5)
= 1 600 + 200 + 280 + 35
= 1 000 + 600 + 200 + 200 + 80 + 30 + 5
= 1 000 + 1 000 + 110+ 5
= 2 000 + 115
= 2 115

a. 28 × 22 =

Continue on an extra sheet of paper.

b. 23 × 57=

Continue on an extra sheet of paper.

c. 35 × 23 =

Continue on an extra sheet of paper.

d. 48 × 32=

Continue on an extra sheet of paper.

3. My answer is 1 440. What can the possible multiplicand and multiplier be?

What is the approximate cost?

What is the approximate cost if my company wants to buy 52 pairs of shoes at R48 per pair?

47 Multiplication: 2-digit numbers by 2-digit numbers

Look at these examples. What do you notice?

Example 1:
6 = 2 × 3
12 = 2 × 2 × 3
36 = 2 × 2 × 3 × 3
18 = 2 × 3 × 3
72 = 2 × 2 × 2 × 3 × 3

Example 2:
45 = 3 × 3 × 5
30 = 2 × 3 × 5
10 = 2 × 5
60 = 2 × 2 × 3 × 5
50 = 2 × 5 × 5

1. Break down the number by multiplying 2s and 3s.

a. 6 b. 72 c. 108

2. Break down the number by multiplying 2s or 3s or 5s or a combination.

a. 30 b. 60 c. 20

3. Break down the multiplier (the second number) by multiplying 2s and 3s.

Example:
47 × 12 = 47 × **2** × **6**
= 47 × **2 × 2 × 3**
= 94 × 2 × 3
= 188 × 3
= (100 + 80 + 8) × 3
= 300 + 240 + 24
= 564

I broke down the second number into 2 and 6

I can break it down even further into 2, 2 and 3

a. 24 × 6 b. 32 × 72 c. 27 × 36

4. Break down the multiplier by multiplying 2s, 3s and 5s.

Example:
53 × 45 = 53 × 9 × 5
= 53 × 3 × 3 × 5
= 159 × 3 × 5
= 477 × 5
= (400 + 70 + 7) × 5
= 2 000 + 350 + 35
= 2 385

I broke down the second number into 9 and 5

I can break it down even further into 3, 3 and 5

a. 29 × 30 b. 44 × 4 c. 56 × 20

An apple a day!

A teacher paid R2 per apple. She bought 45 apples per class. She had to buy for all 3 classes in the grade. How much did she pay?

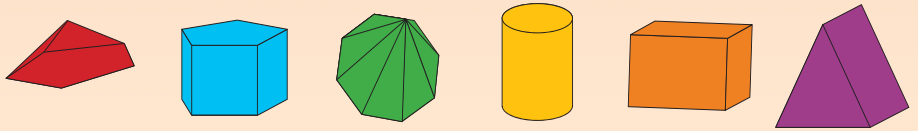
3-D Objects

Look at the picture. Discuss it. Use words such as prisms, pyramids, spheres and cylinders.

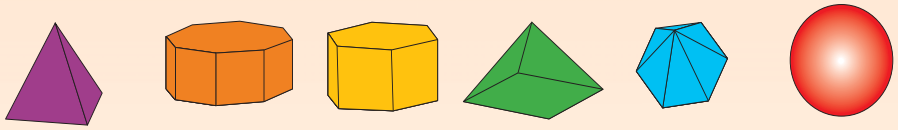
1. Write the number of objects you see in the picture next to the word.

Prisms		Pyramids	
a. Triangular prism		e. Triangular pyramid	
b. Rectangular prism		f. Square pyramid	
c. Pentagonal prism		g. Pentagonal pyramid	
d. Hexagonal prism		h. Hexagonal pyramid	
Spheres		**Cylinders**	

2. Which of these are prisms? Write the names. Which of these are pyramids? Write the names. Which one is the cylinder and sphere?



pentagonal pyramid					



Number madness

Shapes in a poster . . .

Three pictures of products which are packaged in rectangular prisms.

Which kind of prism is most appropriate for packaging books in? Why?

_____

Three everyday objects which are spheres.

Three everyday objects which are cylinders.

49 Faces

Do we see all the faces on the objects?

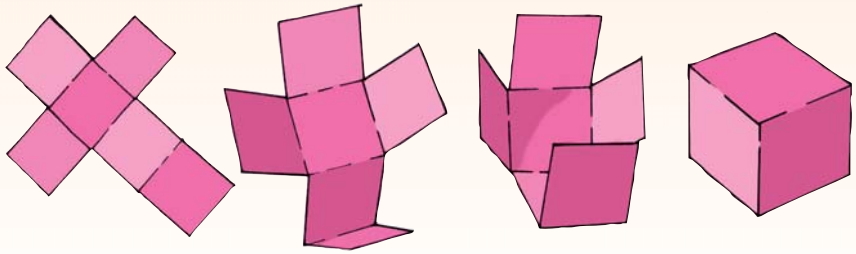
1. **Use Cut-out 7. Fold the nets (patterns) to make prisms and pyramids. Paste a different coloured head on each face (flat side) of the prism or pyramid.**

2. **Name the shapes of the faces (sides) in these objects.**

Prism	Shapes	Pyramids	Shapes
a. Triangular prism	Triangle	e. Triangular pyramid	
b. Cube		f. Square pyramid	
c. Pentagonal prism		g. Pentagonal pyramid	
d. Hexagonal prism		h. Hexagonal pyramid	

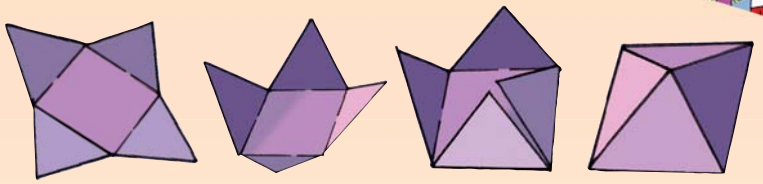
3. **Name the object. Name the shapes of the faces.**

a.



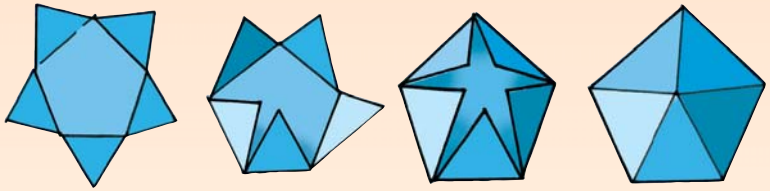
Name of object: _____ Shape of faces: _____

b.



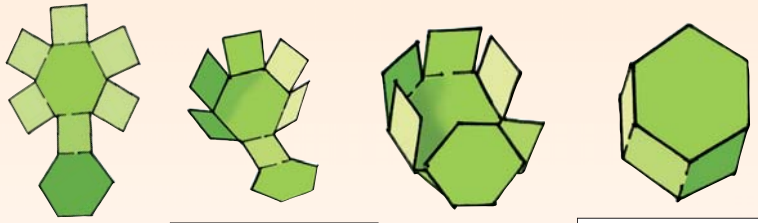
Name of object: _____ Shapes of faces: _____

c.



Name of object: _____ Shapes of faces: _____

d.



Name of object: _____ Shapes of faces: _____

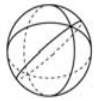
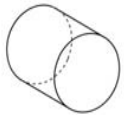
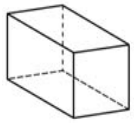
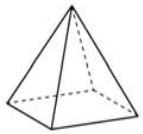
Everyday objects

Name the shapes of the faces of each object.

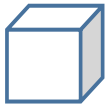
_____ _____ _____

50 Describing and making models of 3-D objects

Look at these examples. What do you notice?

Spheres	Cylinders	Cones	Rectangular prisms	Square-based pyramids
				
curved surfaces	flat and curved surfaces	flat and curved surfaces	flat surfaces	flat surfaces

1. Complete the table

3-D object	Name the 3-D object	Number of faces	Shape of shaded face of the 3-D object
			

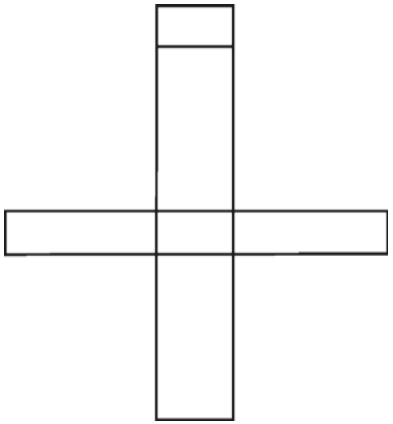
2. Name the object these shapes are forming.

a.

b.

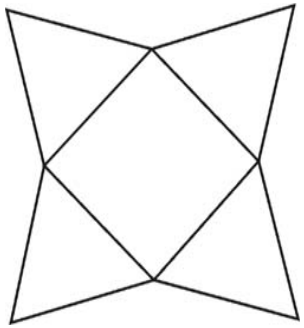
3. Trace the nets to make the 3-D objects. Describe each object.

a. Rectangular prism



Describe the object by using words such as:
- Surfaces (flat and curved)
- Shape of faces

b. Square-based pyramid



Describe the object by using words such as:
- Surfaces (flat and curved)
- Shape of faces

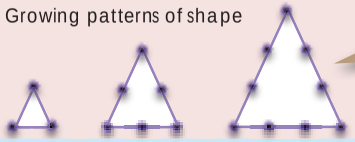
Box work

Redesign your favourite box.
Choose a box that is a rectangular prism. Unfold it. Copy the pattern (net) and make a similar box.

51 Investigate geometric patterns

Look and discuss

Growing patterns of shape

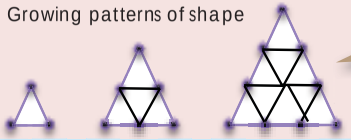


Growing patterns of numbers
3 6 10

What will the next pattern be?

How do the patterns differ?

Growing patterns of shape



Growing patterns of numbers
1 4 9

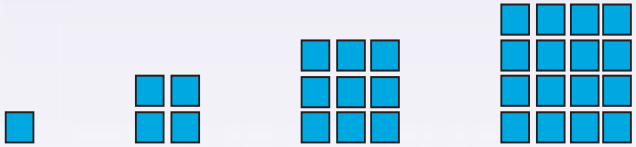
What will the next pattern be?

1. Extend the geometric pattern and write it as a number pattern.

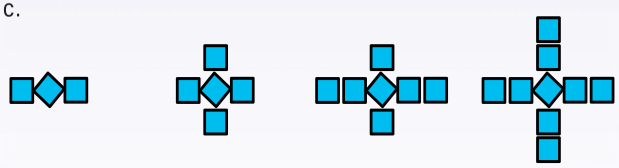
a.

1 4 9 16

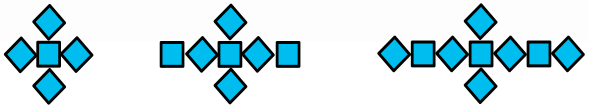
b.



c.

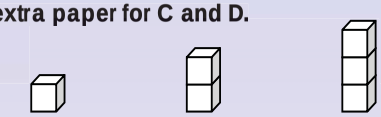


d.



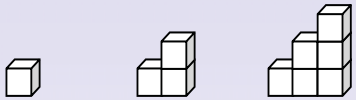
2. Extend the geometric pattern and complete the table. You may need extra paper for C and D.

a.



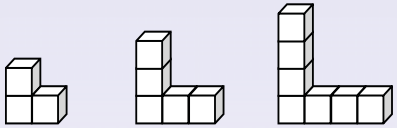
Pattern	1	2	3	4	5	6	10
Number of blocks							

b.



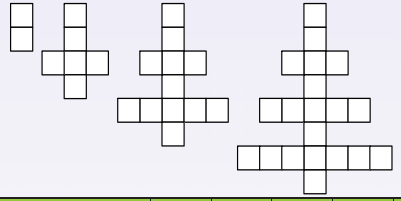
Pattern	1	2	3	4	5	6	10
Number of blocks							

c.



Pattern	1	2	3	4	5	6	10
Number of blocks							

d.



Pattern	1	2	3	4	5	6	10
Number of blocks							

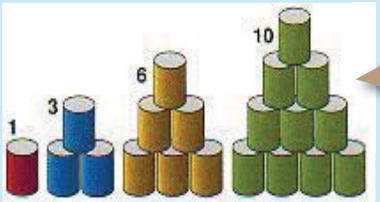
Patterns in a sequence

What is the tenth pattern? Use a table to show your answer.

52 Investigate and extend geometric patterns

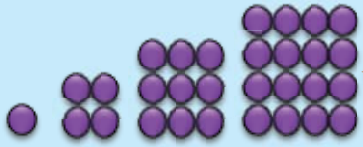
Let us do some practical activities.

Build the following using cool drink cans. What is the difference between the patterns? What will the difference be between the fourth and the fifth pattern?



The difference between the first and second pattern is 2, between the second and the third pattern is 3, and between the third and fourth pattern is 4.

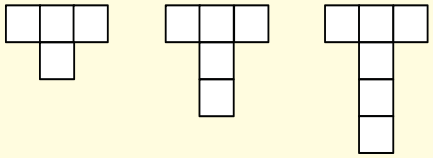
Build the following using bottle tops. What is the difference between the patterns? What will the difference be between the fourth and the fifth pattern?



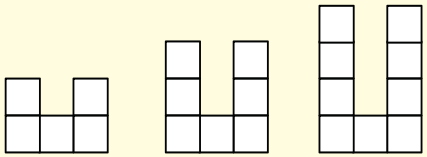
The difference between the first and second pattern is 3, between the second and the third pattern is 5, and between the third and fourth pattern is 7.

1. Extend each pattern. Say what is the difference between the patterns. Say if the difference is the same or different between the patterns.

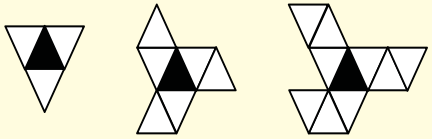
a.



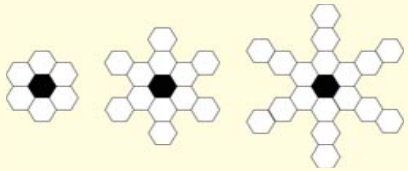
b.



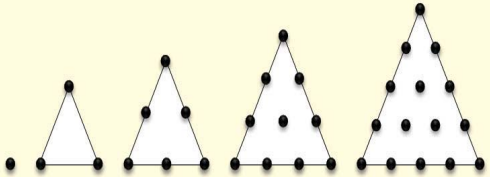
c.



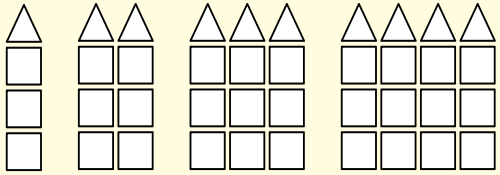
d.



e.

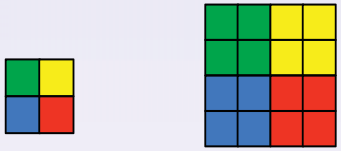


f.



2. Extend the patterns.

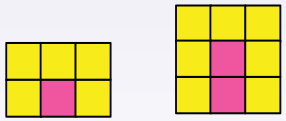
a.



1 + 1 + 1 +1 = 4

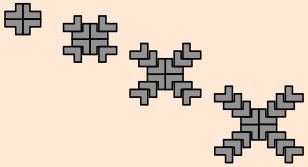
4 + 4 + 4 +4 = 16

b.



Be creative

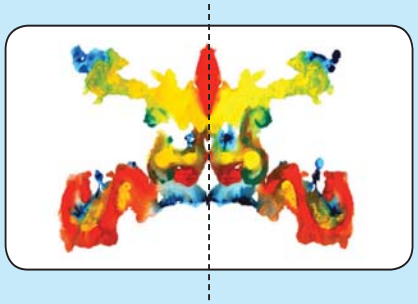
Extend this pattern. Make use of colour to make your pattern more interesting.



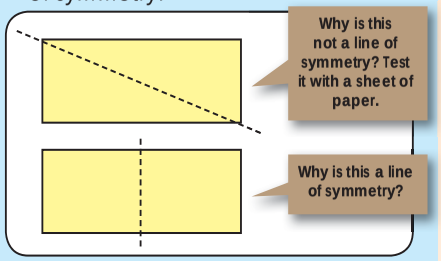
53 Symmetry

Do these two practical activities.

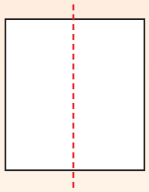
Make a symmetrical picture using **paper** and **paint**. Describe your picture. Draw a line of symmetry.



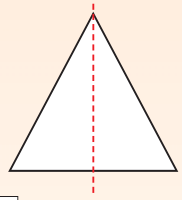
Use **paper** to show the line of symmetry. When the folded part fits perfectly on top (all edges matching), then the fold line is a line of symmetry.



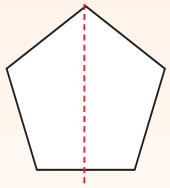
1. Are these the only lines of symmetry? How many more lines of symmetry can you identify? Draw them in a different colour.



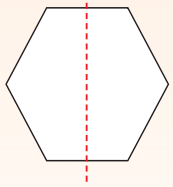
☐ lines of symmetry



☐ lines of symmetry

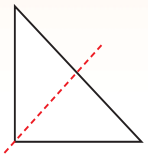


☐ lines of symmetry



☐ lines of symmetry

2. Why do we have only one line of symmetry on this triangle?



3. **Draw a line of symmetry on these real life objects.**

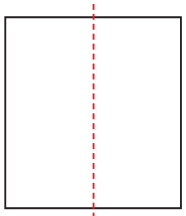
4. **Colour the butterflies to show that they are symmetrical.**

5. **Which of these pictures have lines of symmetry?**

☐ ☐

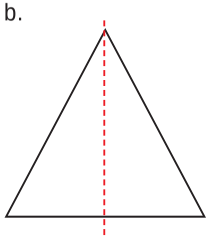
6. **How many more lines of symmetry can you identify? What is the total number?**

a.



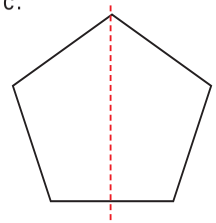
☐ lines of symmetry

b.



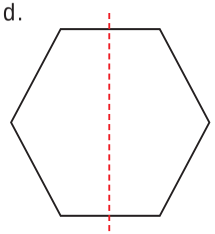
☐ lines of symmetry

c.



☐ lines of symmetry

d.



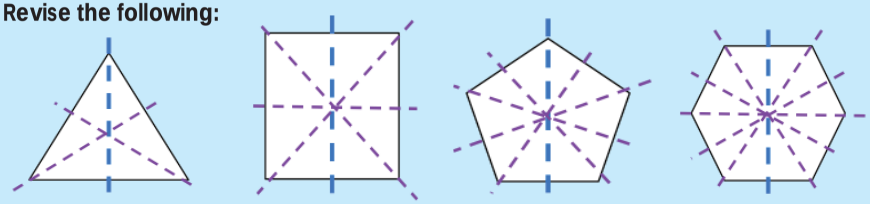
☐ lines of symmetry

How many?

How many lines of symmetry will a regular octagon have?

54 Lines of symmetry

Revise the following:



three lines of symmetry | four lines of symmetry | five lines of symmetry | six lines of symmetry

1. Show the lines of symmetry on the letters that are symmetrical.

a. The letters that have lines of symmetry are

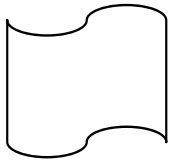
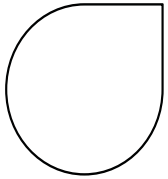
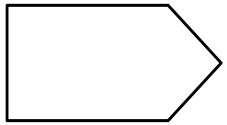
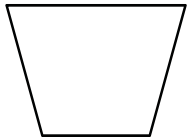
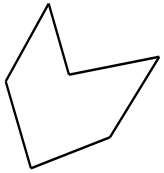
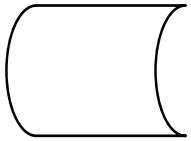
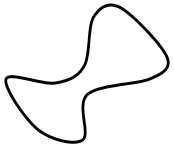
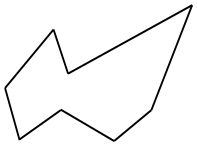
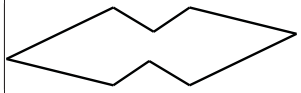
b. The letters that do not have lines of symmetry are:

2. We will find numbers like these on, for example, a digital clock. Write in the block on the right-hand side the numbers that are symmetrical. Show the line of symmetry.

3. Answer these questions.

i. Does the shape have a line or lines of symmetry? Answer yes or no.

ii. How many lines of symmetry will the following shapes have? Show the lines of symmetry on the shapes that are symmetrical.

a.  i. ____ ii. ____ lines of symmetry	b.  i. ____ ii. ____ lines of symmetry	c.  i. ____ ii. ____ lines of symmetry
d.  i. ____ ii. ____ lines of symmetry	e.  i. ____ ii. ____ lines of symmetry	f.  i. ____ ii. ____ lines of symmetry
g.  i. ____ ii. ____ lines of symmetry	h.  i. ____ ii. ____ lines of symmetry	i.  i. ____ ii. ____ lines of symmetry

The flag

Is the South African flag symmetrical?

55 Addition and subtraction

What is the difference between the numbers? Count forwards.

1 000	2 000	3 000	4 000	5 000
2 600	2 700	2 800	2 900	3 000
500	1 500	2 500	3 500	4 500
109	1 109	2 109	3 109	4 109
1 500	2 000	2 500	3 500	4 000

What is the difference between the numbers? Count backwards.

1. What number comes next?

a. 1 000, 2 000, 3 000, ____

b. 3 300, 3 400, 3 500, ____

c. 689, 1 689, 2 689, ____

d. 2 760, 3 760, 4 760, ____

2. Complete the table by adding or subtracting to or from the number in the first column.

Number	Add 100	Subtract 100	Add 1 000	Subtract 1 000
3 212				
2 910				
3 106				
1 069				
2 989				

Examples:

Example 1:

1 256 + 1 323 | 1 000 | 200 | 50 | 6 | 1 000 | 300 | 20 | 3

= 1 000 + 1 000 + 200 + 300 + 50 + 20 + 6 + 3

= 2 000 + 500 + 70 + 9

= 2 579

Example 2:

2 459 + 1 816 | 2 000 | 400 | 50 | 9 | 1 000 | 800 | 10 | 6

= 2 000 + 1 000 + 400 + 800 + 50 + 10 + 9 + 6

= 3 000 +1 200 + 60 + 15

= 3 000 + 1 000 + 200 + 60 + 10 + 5

= 4 000 + 200 + 70 + 5

= 4 275

3. Calculate these sums. Write the steps you use on a separate piece of paper.

a. 2 481 + 1 318 = ____

b. 1 516 + 3 243 = ____

c. 3 265 + 1 329 = ____

d. 2 548 + 1 264 = ____

e. 1 458 + 1 258 = ____

f. 1 786 + 2 547 = ____

4. Complete the word problems. Show your calculations.

a. There were 75 children in the music lesson, 15 went home early and 3 went to soccer lessons. How many children were left in the music lesson?

Continue on an extra sheet of paper

b. Andile collects 2 283 cans for recycling in the first month. He collects 3 325 cans in the second month. How many cans did he collect altogether?

Continue on an extra sheet of paper

I dropped my number puzzle.

I dropped my puzzle pieces. Help me to fill the spaces so that each row and column adds up to 15. You can only use each number once.

2 3 8 7 4 6 1 5 9

56 Addition and subtraction up to 4-digit numbers

What is the difference between the numbers? Count forwards and backwards.

6 000	7 000	8 000	9 000	10 000
3 070	4 070	5 070	6 070	7 070
3 600	4 600	5 600	6 600	7 600
5 900	6 900	7 900	8 900	9 900
5 998	6 098	6 198	6 298	6 398

1. What number comes next?

a. 7 000, 8 000, 9 000, _____

b. 6 647, 6 747, 6 847, _____

c. 6 989, 7 989, 8 989, _____

d. 8 406, 8 906, 9 406, _____

2. Complete the table.

Number	Add 100	Subtract 100	Add 1 000	Subtract 1 000
7 416				
8 896				
4 560				
6 209				
8 008				

3. Calculate the following:

a. 7 568 + 64 =

b. 8 721 + 657 =

c. 4 825 + 1 265 =

d. 2 548 + 6 980 =

4. Subtract the following:

a. 9 471 – 49 =

b. 7 958 – 394 =

c. 9 864 – 1 459 =

d. 8 210 – 5 784 =

5. 3 500 people attended the first show of a concert.
Another 2 425 booked tickets for the second show but 518 of them did not arrive.
How many people attended the second show?

How quick can you calculate?

start

100 ≤ 100 ≤ 100 ≤ 100 ≤ 100 ≤ 100 ≤ 100 ≤ 100 ≤

100 ≤ 100 ≤ 100 ≤ 100 ≤ 100 ≤ 100 ≤ 100 ≤ 100 ≤

100 ≤ 100 ≤ 100 ≤ 100 ≤ 100 ≤ 100 ≤ 100 ∇ ◯

end

57 Addition of 4-digit numbers

Term 2

Explain the following:

8 934	8 000 + 900 + 30 + 4
6 892	6 00 + 800 + 90 + 2
5 035	5 000 + 30 + 5
7 002	7 000 + 2

1. Complete the following, using the example provided.

Example

8 + 7 =	15	= 10 + 5
80 + 70 =	150	= 100 + 50
800 + 700 =	1 500	= 1 000 + 500

a.

9 + 6 =	15	= 10 + 5
90 + 60 =		=
900 + 600 =		=

b.

5 + 6 =		=
50 + 60 =		=
500 + 600 =		=

2. Calculate the following:

Example:

Calculate 5 362 + 2 486

5 362 + 2 486
= 5 000 + 300 + 60 + 2 + 2 000 + 400 + 80 + 6
= 5 000 + 2 000 + 300 + 400 + 60 + 80 + 2 + 6
= 7 000 + 700 + 140 + 8
= 7 848

OR

2 + 6 =8
And 60 + 80 = 140
And 300 + 400 = 700
And 5 000 + 2 000 = 7 000
5 362 + 2 486 = 7 848

a. 8 743 + 1 246 =

b. 1 726 + 6 484 =

c. 1 234 + 7 689 =

3. Calculate the following:

Example: Calculate 5 362 + **2 486**
5 362 + **2 000** → 7 362 + **400** → 7 762 + **80** → 7 842 + **6** → 7 848

a. 8 657 + 1 132 =

b. 5 189 + 4 810 =

c. 4 610 + 5 379 =

d. 7 944 + 2 476 =

e. 7 562 + 2 548 =

f. 4 618 + 3 795 =

At the zoo

There were 3 562 people at the zoo during the first week of February. During the second week there were 3 649. How many people visited the zoo during the first two weeks of February?

58 Problem solving: addition and subtraction

Look at the pictures. How do you feel when you get a problem to solve? How should you feel if you want to do well in mathematics?

1. Solve the following problems:

a. Anandi bought an oven for R3 780 and a dinner set for R6 560. How much did she pay altogether?

b. Susan earns R3 460 each month cooking. How much does she earn in two months?

c. I have R6 834 in my bank account. I save R2 573. How much money do I have now?

d. Mark bought a computer and a computer program. He paid R9 470. The computer cost R7 435. How much did he pay for the computer program?

e. Mandla and Thandi bought plane tickets to visit their older brother in England. They paid R7 678 for one ticket. How much did the two tickets cost together?

f. Shakira has to send out books to schools in each province. She still needs to send 2 895 copies to North-West and 4 678 copies to the Northern Cape. How many copies have not been delivered yet?

g. Lerato is getting married. She paid R2 578 for the flowers and R4 243 for the food. How much did she have to pay for the flowers and the food together?

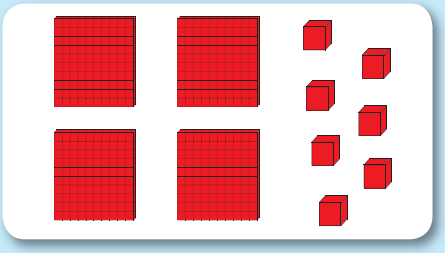
h. Wendy went to Durban. She paid R3 584 to stay at a hotel for a week. How much would she pay if she wanted to stay for two weeks?

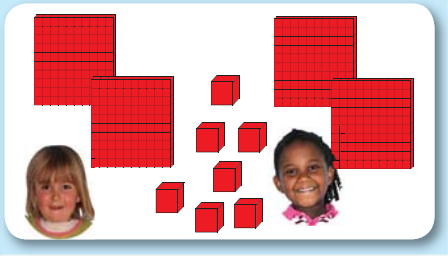
Four-digit problems

Create your own interesting maths problem using two 4-digit numbers.

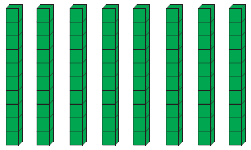
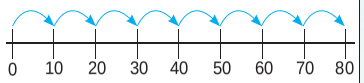
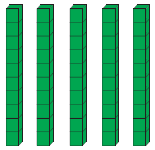
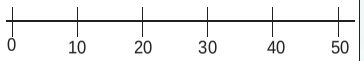
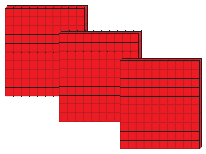
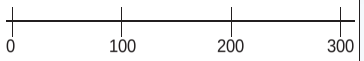
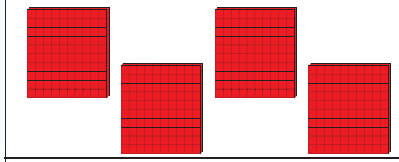
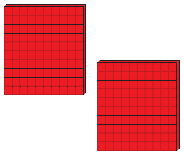
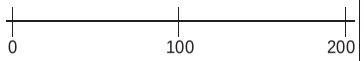
59 Sharing and Grouping problems

Look at the two pictures below. Use the words 'group' and 'share' to describe it.





1. Complete the table using the example in the first row to guide you:

	Share between	Division sum
	8	80 ÷ 8 = ☐ 
	5	
	3	
	4	
	2	

2. Complete the following:

Describe the picture you see when you do these division sums.

2

20 ÷ 2 = ☐	200 ÷ 2 = ☐
18 ÷ 2 = ☐	180 ÷ 2 = ☐
16 ÷ 2 = ☐	160 ÷ 2 = ☐
14 ÷ 2 = ☐	140 ÷ 2 = ☐
12 ÷ 2 = ☐	120 ÷ 2 = ☐
10 ÷ 2 = ☐	100 ÷ 2 = ☐
8 ÷ 2 = ☐	80 ÷ 2 = ☐
6 ÷ 2 = ☐	60 ÷ 2 = ☐
4 ÷ 2 = ☐	40 ÷ 2 = ☐

3

30 ÷ 3 = ☐	300 ÷ 3 = ☐
27 ÷ 3 = ☐	270 ÷ 3 = ☐
24 ÷ 3 = ☐	240 ÷ 3 = ☐
21 ÷ 3 = ☐	210 ÷ 3 = ☐
18 ÷ 3 = ☐	180 ÷ 3 = ☐
15 ÷ 3 = ☐	150 ÷ 3 = ☐
12 ÷ 3 = ☐	120 ÷ 3 = ☐
9 ÷ 3 = ☐	90 ÷ 3 = ☐
6 ÷ 3 = ☐	60 ÷ 3 = ☐

4

40 ÷ 4 = ☐	400 ÷ 4 = ☐
36 ÷ 4 = ☐	360 ÷ 4 = ☐
32 ÷ 4 = ☐	320 ÷ 4 = ☐
28 ÷ 4 = ☐	280 ÷ 4 = ☐
24 ÷ 4 = ☐	240 ÷ 4 = ☐
20 ÷ 4 = ☐	200 ÷ 4 = ☐
16 ÷ 4 = ☐	160 ÷ 4 = ☐
12 ÷ 4 = ☐	120 ÷ 4 = ☐
8 ÷ 4 = ☐	80 ÷ 4 = ☐

5

50 ÷ 5 = ☐	500 ÷ 5 = ☐
45 ÷ 5 = ☐	450 ÷ 5 = ☐
40 ÷ 5 = ☐	400 ÷ 5 = ☐
35 ÷ 5 = ☐	350 ÷ 5 = ☐
30 ÷ 5 = ☐	300 ÷ 5 = ☐
25 ÷ 5 = ☐	250 ÷ 5 = ☐
20 ÷ 5 = ☐	200 ÷ 5 = ☐
15 ÷ 5 = ☐	150 ÷ 5 = ☐
10 ÷ 5 = ☐	100 ÷ 5 = ☐

How fast are you?

Colour any two numbers that will give you an answer of 2.

2

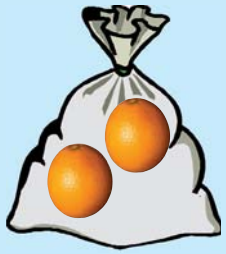
8 4 5 13 12 22 6 3 20 30 2 11 1 7 9 32 10

Colour any two numbers that will give you an answer of 3.

3

8 33 23 12 13 9 6 5 9 30 10 3 15 88 99 7 11 61 90

Bag with 2 oranges.



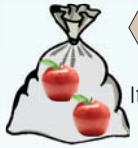
1. Complete the following:

a. R6

It is R _____ per orange

b. R10

It is R _____ per orange

c.  R5

It is R _____ per apple

d. R10

It is R _____ per apple

e. R2

It is R _____ per banana

The symbol we use for rate is /
Example: R2/orange.

2. Write questions 1 a, b, c, d and e, above, with the "/" symbol

a. R _____

b. R _____

c. R _____

d. R _____

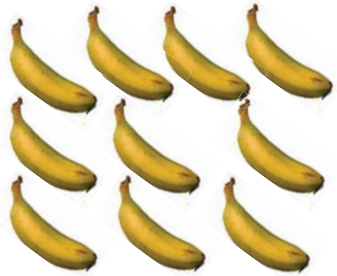
e. R _____

3. Complete the following:

How much do these apples cost if one apple costs R2?

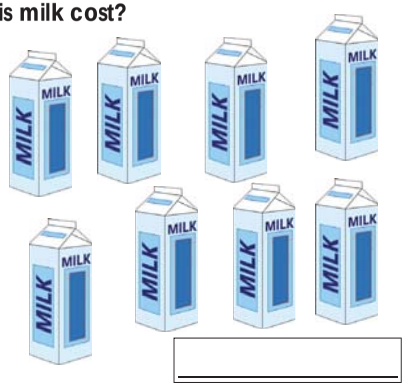
_____

How much do these bananas cost if each banana costs R1,50?



_____

The milk costs R10/litre. How much does this milk cost?

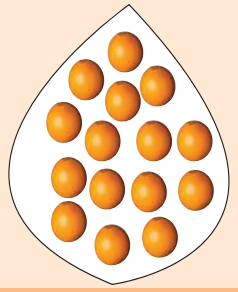


_____

The chicken is on special for R25/kg. How much will 2 kg cost?

_____

Quick counting ...

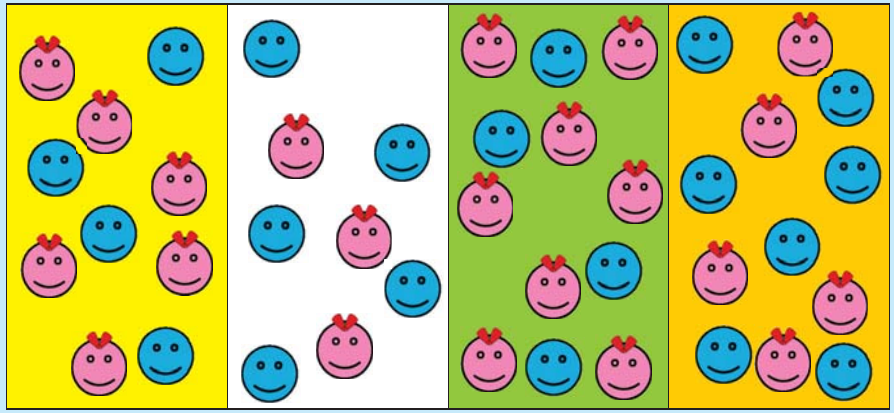


Quickly count the oranges in the bag. All of them cost R15. How much does one orange cost?

Remember: always do this activity when you go to a shop. This will sharpen your mental maths skills.

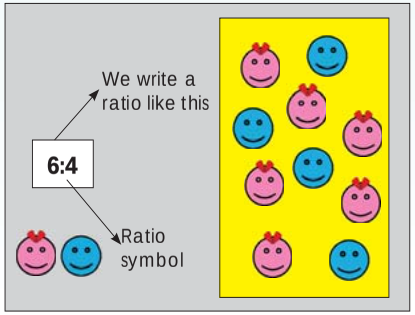
61 Ratio

How many girls are there in each picture?
How many boys are there in each picture?

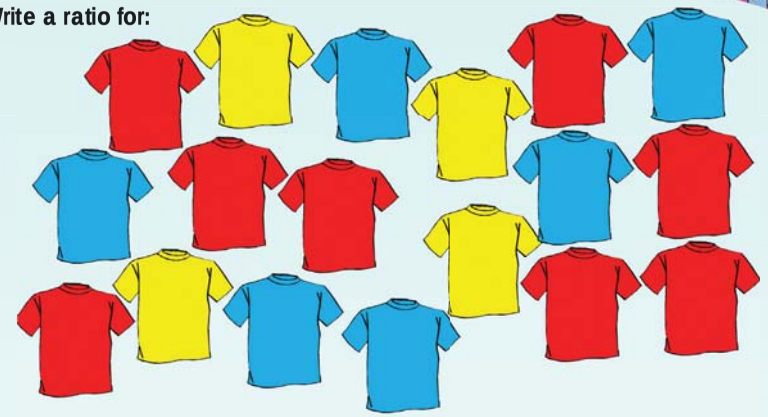


1. Complete the following:

Class	Girls	Boys	We can write it as:
Yellow	6	4	6:4
White			
Green			
Orange			



2. Write a ratio for:



a. Blue and red shirts. _____

b. Blue and yellow shirts. _____

c. Red and yellow shirts. _____

3. Draw the following:

Red and yellow flowers 4:5	Dogs and cats 8:6
Boys and girls 8:10	Apples and bananas 7:8

I love my teacher ...

You have written this message for your teacher. What will the ratios be between:

- Red and blue jelly tots?
- Green and black jelly tots?
- Oranges and blue jelly tots?

62 Division of 2-digit numbers by 1-digit numbers

Reverse these division sums by giving a multiplication sum for each. We call this an inverse operation.

14 ÷ 2 = 7	50 ÷ 5 = 10	9 ÷ 3 = 3	36 ÷ 9 = 4
48 ÷ 6 = 8	15 ÷ 3 = 5	12 ÷ 2 = 6	24 ÷ 8 = 3
49 ÷ 7 = 7	64 ÷ 8 = 8	21 ÷ 3 = 7	35 ÷ 7 = 5
6 ÷ 3 = 2	25 ÷ 5 = 5	60 ÷ 6 = 10	40 ÷ 5 = 8
12 ÷ 6 = 2	18 ÷ 2 = 9	14 ÷ 7 = 2	40 ÷ 8 = 5

1. Give the inverse operation for the following.

a. 57 ÷ 3 = ____ b. 56 ÷ 8 = ____ c. 60 ÷ 5 = ____

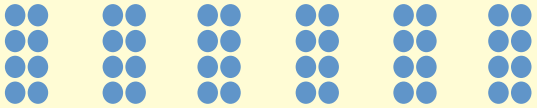
d. 63 ÷ 9 = ____ e. 68 ÷ 4 = ____ f. 48 ÷ 2 = ____

g. 54 ÷ 6 = ____ h. 45 ÷ 9 = ____ i. 42 ÷ 7 = ____

2. Use the two examples to guide you to solve the division sums.

Example 1:
50 ÷ 8 =
We can ask ourselves. How many groups of 8 will give us 50?

Let us count 8 16 24 32 40 48



Example 2:
50 ÷ 8 =
We can ask ourselves. If I share 50 between 8, how much will each get?

Let us share

If we share 8 between 50 we will get 6 and two remainders.

You can also use the table to help you.

1 × 8 = 8
2 × 8 = 16
3 × 8 = 24
4 × 8 = 32
5 × 8 = 40
6 × 8 = 48
7 × 8 = 56
8 × 8 = 64
9 × 8 = 72

a. 60 ÷ 8 = ____ b. 40 ÷ 9 = ____ c. 31 ÷ 5 = ____

d. 43 ÷ 2 = ____ e. 66 ÷ 7 = ____ f. 49 ÷ 4 = ____

3. Use the two examples to guide you to solve the division sums.

Example 1:
500 ÷ 8

We can ask ourselves how many groups of 8 will give us 500.

We say:

10 groups of 8 is 80
20 groups of 8 is 160
30 groups of 8 is 240
40 groups of 8 is 320
50 groups of 8 is 400
60 groups of 8 is 480
70 groups of 8 is 560

We write:

10 × 8 = 80
20 × 8 = 160
30 × 8 = 240
40 × 8 = 320
50 × 8 = 400
60 × 8 = 480
70 × 8 = 560

- **60 groups** of 8 will give us 480
- 70 groups of 8 will give us 560
- 560 is too big, so we will choose 60 groups

Sixty groups of 8 will give me 480 with 20 left.

Now we can ask ourselves how many groups of 8 will give us 20.

We say:

1 group of 8 is 8
2 groups of 8 is 16
3 groups of 8 is 24

We write:

1 × 8 = 8
2 × 8 = 16
3 × 8 = 24

2 groups of 8 will give us 16
3 groups of 8 will give us 24
24 is too big, so we will choose 2 groups

Two groups of 8 will give me 16 with **4 left**.
60 groups + **2** groups = **62** groups
500 ÷ 8 = 62 rem **4**

Example 2:

```
     62 rem 4
8 | 500
   - 48
     20
   - 16
      4
```

60 groups of 8 is 480

2 groups of 8 is 16

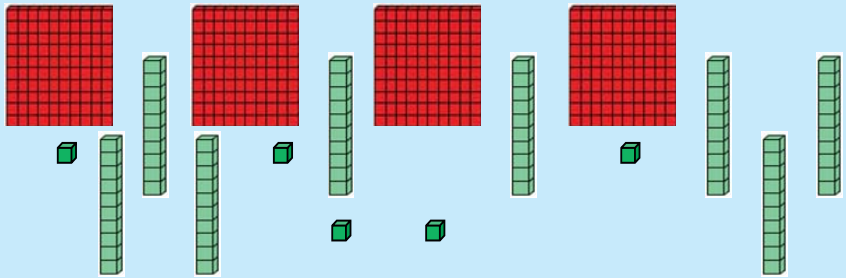
a. 650 ÷ 9 = ____ b. 400 ÷ 9 = ____ c. 301 ÷ 5 = ____

Sharing equally problems

a. How many groups of 4 can you make with 36 marbles?
b. How many groups of 8 can you make with 56 counters?
c. How many groups of 6 can you make with 42 cards?
d. Share 54 counters amongst 8 children.
e. Share 47 marbles amongst 4 children.
f. Share 43 sweets amongst 6 children.

63 Division of 3-digit numbers by 1-digit numbers

Share the blocks between 2 children. Do you have any blocks left?



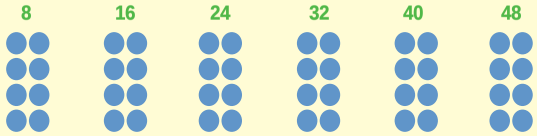
1. Calculate the following:

Example 1:
375 ÷ 8 =
Let us break down them number 375 into (370 + 5).

Let us ask ourselves how many groups of 8 will give us 37?

Tens × 8
10 × 8 = 80
20 × 8 = 160
30 × 8 = 240
40 × 8 = 320
50 × 8 = 400
60 × 8 = 480
70 × 8 = 560
80 × 8 = 640
90 × 8 = 720

Let us count



4 groups will give us 32 but 5 groups are too big. How many groups of 8 will give us 370.
40 groups will give us 320 but 50 groups will give us 400. We have 50 left plus 5.

Units × 8
1 × 8 = 8
2 × 8 = 16
3 × 8 = 24
4 × 8 = 32
5 × 8 = 40
6 × 8 = 48
7 × 8 = 56
8 × 8 = 64
9 × 8 = 72

How many groups of 8 will give us 55.

Let us count

6 groups will give us 48 but 7 groups is too big.
So we have 48 and 7 left over.

The answer to 375 ÷ 8 is 46 remainder 7.

a. 925 ÷ 2 =

b. 457 ÷ 7 =

c. 596 ÷ 3 =

d. 338 ÷ 8 =

e. 767 ÷ 4 =

f. 806 ÷ 9 =

g. 649 ÷ 5 =

h. 179 ÷ 8 =

i. 285 ÷ 6 =

Sharing the money

We are four children in our family. My father gave us R350 to share. We each received the same amount in full rands. How many rands remained?

Sign:

Date:

64 Division problems

Here are some key words for division and multiplication. Can you add any other words to the list?

Multiply by, multiply, groups of, product, lots of, times table, times, of

Divide by, share, share equally, divisible by, divide, divide into, group

1. Solve the following problems:

a. I bought five sport t-shirts for R265. How much did I pay per t-shirt?

i. What is the question? How much did I pay per t-shirt?

ii. What are the numbers? R265 and 5

iii. What is the key word? Per (per tells me to divide)

iv What is the number sentence? R265 ÷ 5 = ☐

v. Solve it: R265 ÷ 5 = R53

vi. Write a sentence: I paid R53 for each t-shirt.

b. A shoe shop sells all pairs of shoes for R82. My mother and sister bought 9 pairs altogether. How much did they pay?

i. _____

ii. _____

iii. _____

iv. _____

v. _____

vi. _____

c. The bookshop sold 8 books for R500. How much did each book cost?

i. _____

ii. _____

iii. _____

iv. _____

v. _____

vi. _____

d. My teacher bought 7 story books for R69 each. How much did she pay for all the story books?

i. _____

ii. _____

iii. _____

iv. _____

v. _____

vi. _____

e. My mother bought computer gadgets for R98 each. She bought 5 gadgets. How much did she pay altogether?

i. _____

ii. _____

iii. _____

iv. _____

v. _____

vi. _____

f. I spent R600 on 6 computer games. How much did I pay for each game?

i. _____

ii. _____

iii. _____

iv. _____

v. _____

vi. _____

g. My mother went on a training course for 7 days. The lunch cost R75 per day. How much did she pay for her lunches?

i. _____

ii. _____

iii. _____

iv. _____

v. _____

vi. _____

g. I have R400. Computer games cost R75 each. How many games could I buy?

i. _____

ii. _____

iii. _____

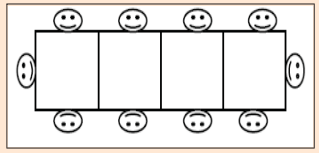
iv. _____

v. _____

vi. _____

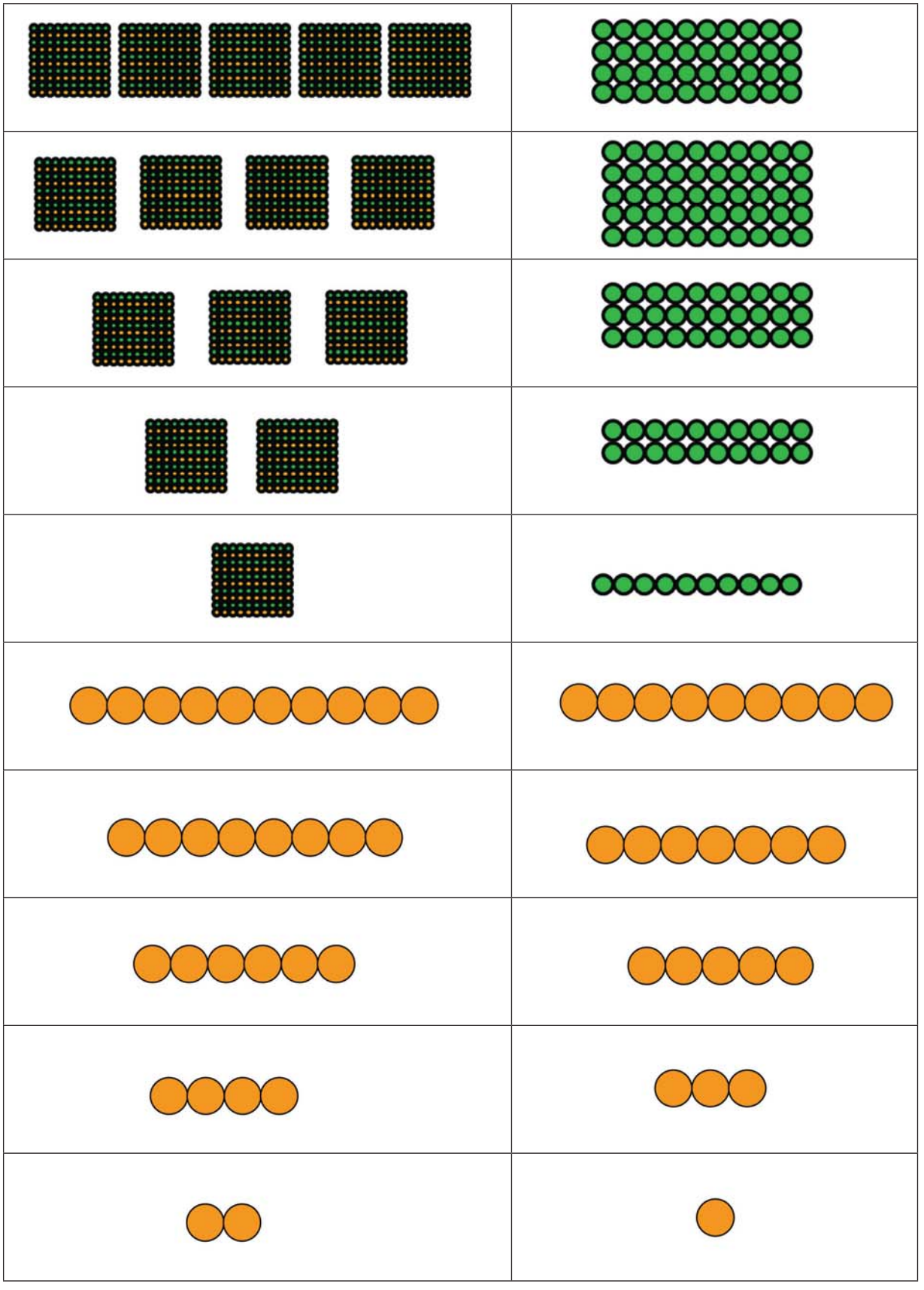
Seating the guests

You need seats for 58 people at your party. You make one long table by joining a number of small tables. Each small table can seat two persons, plus one at each end of the long table, e.g. the 4 small tables below can seat 10 people. How many small tables do you need?



a. 28
b. 29
c. 30
d. 32
e. 34

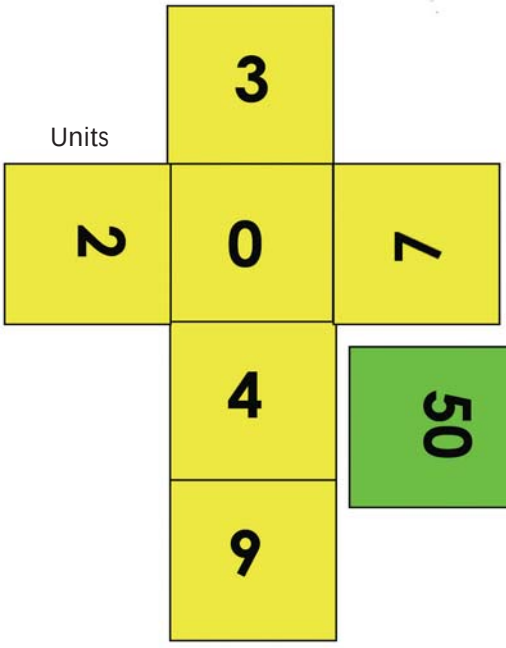
Notes



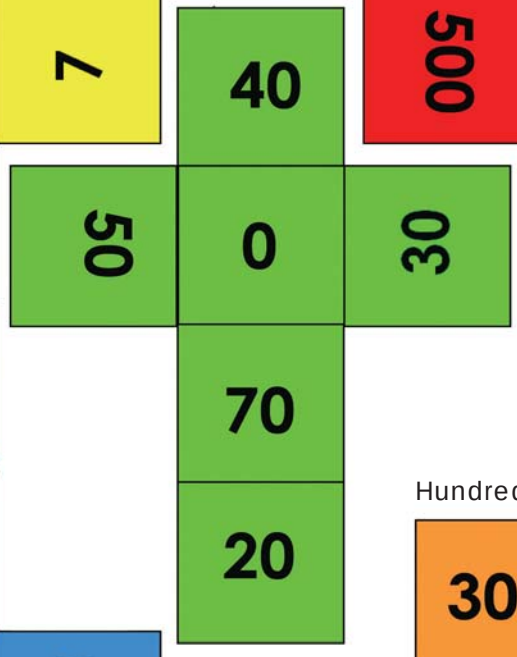
1	2	3	4	5	6	7	8	9
1	2	3	4	5	6	7	8	9
1	2	3	4	5	6	7	8	9
1	2	3	4	5	6	7	8	9

Note: Make dice from these Cut-outs. After assembling the dice, keep them in a safe place because you will use them throughout the year.

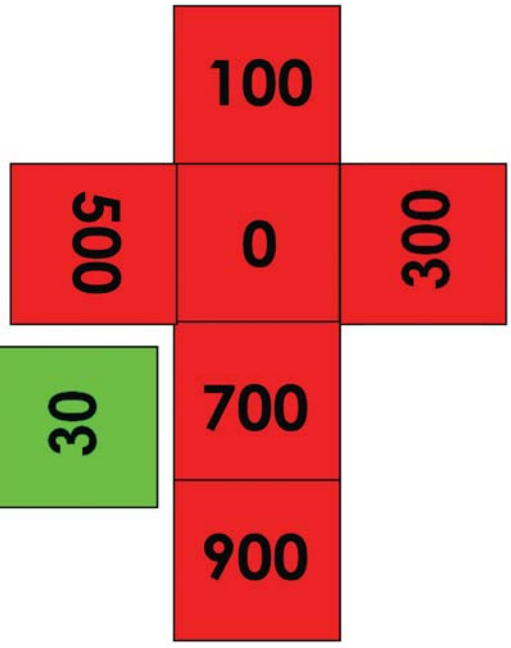
Units



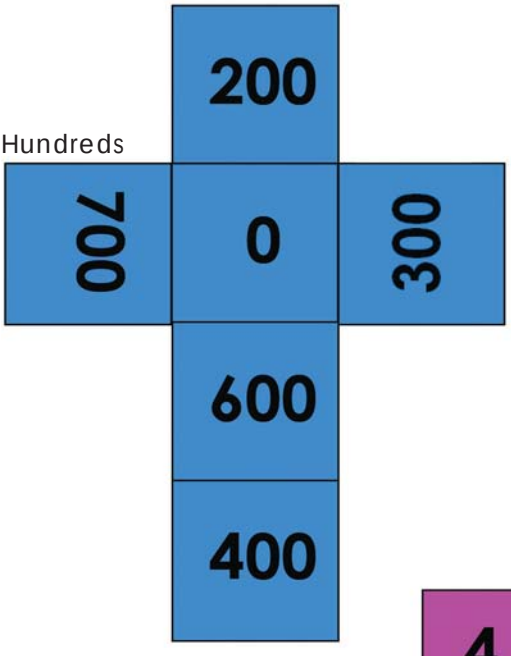
Tens



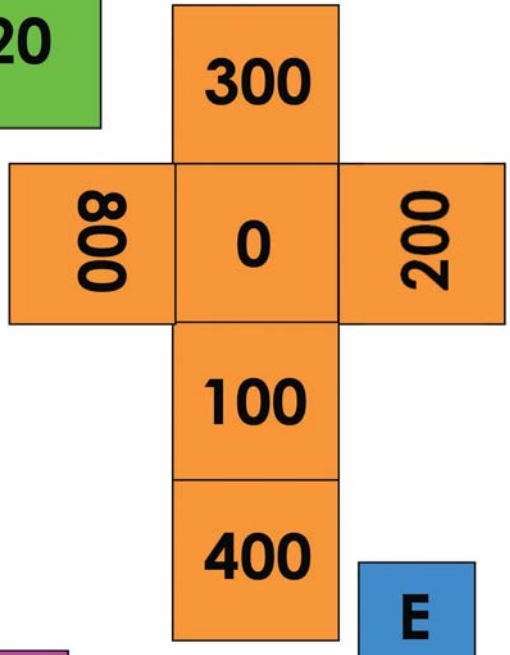
Hundreds

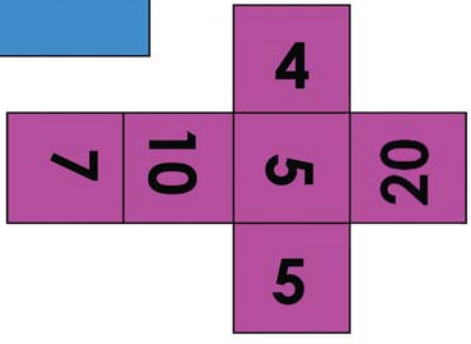


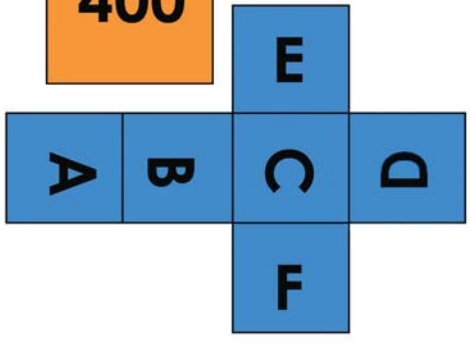
Hundreds



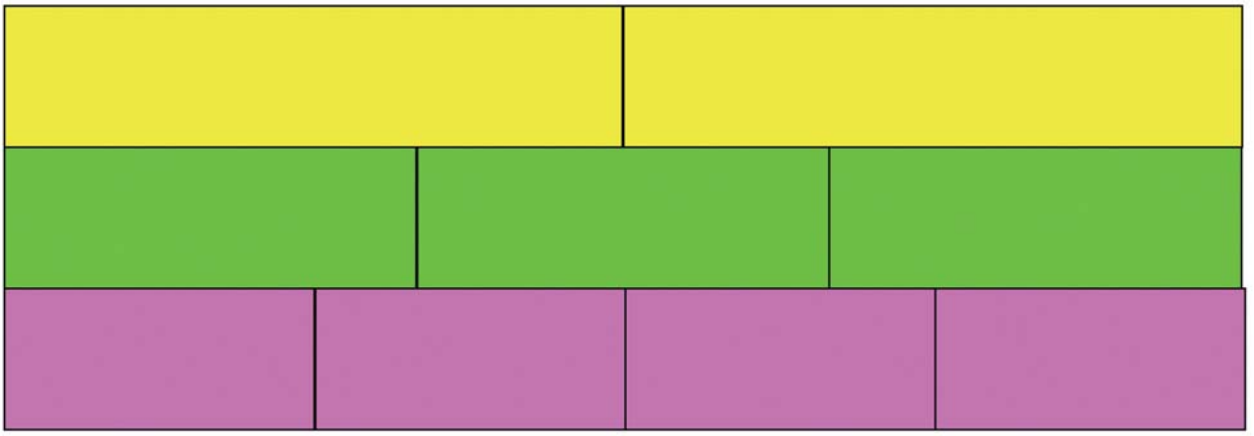
Hundreds



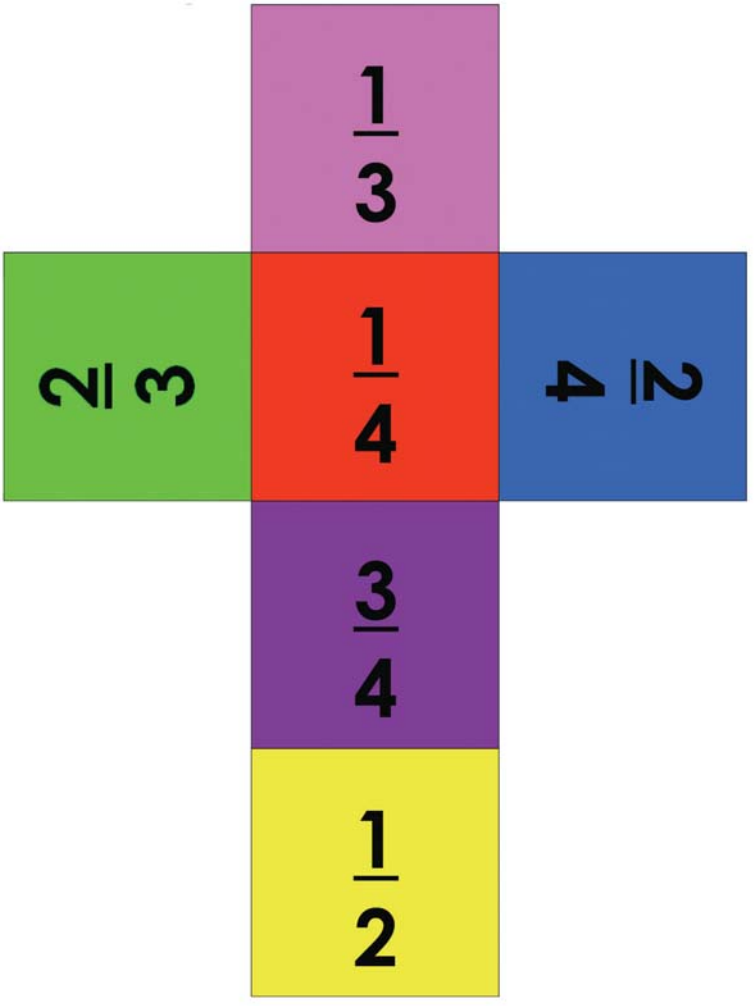


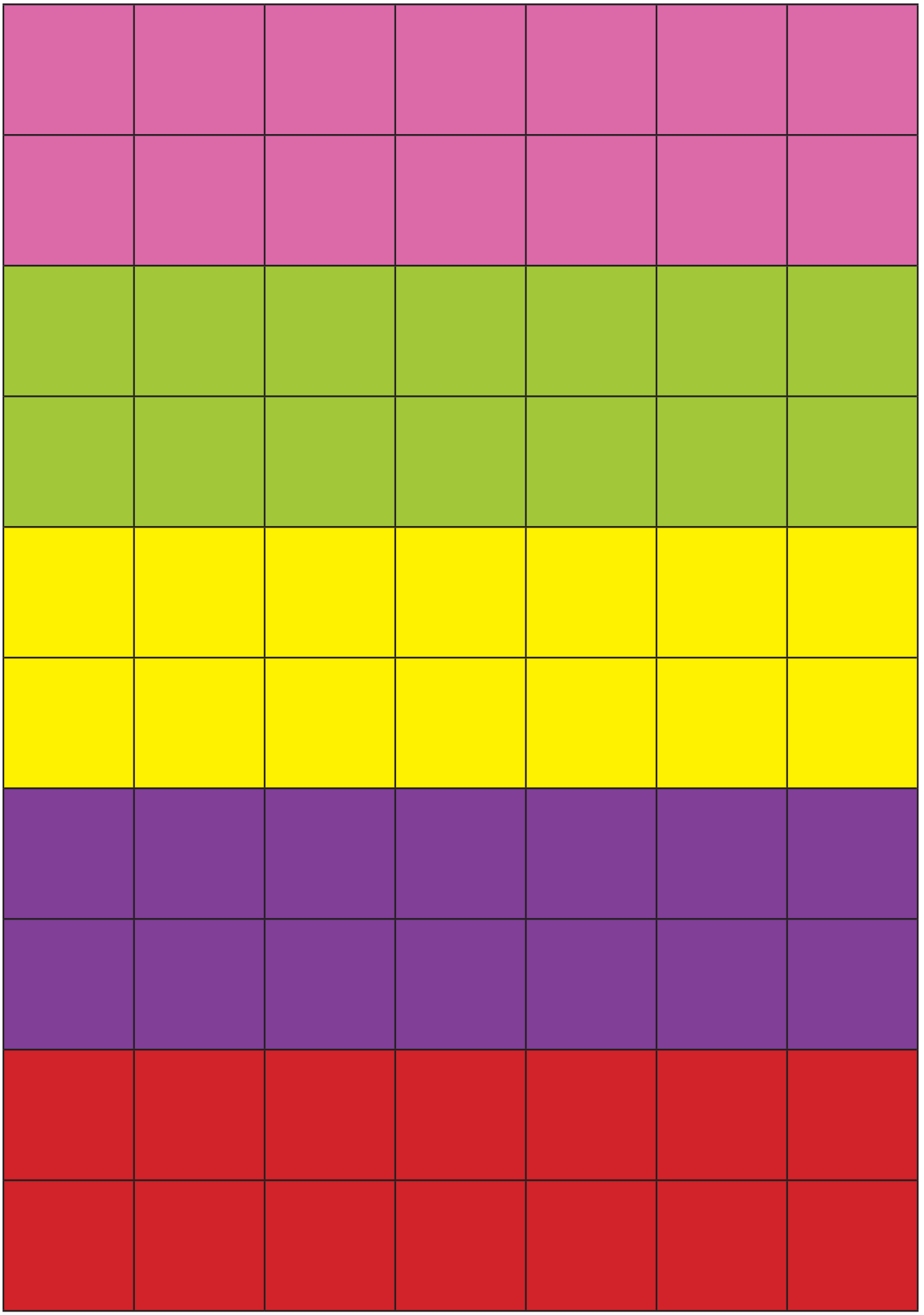


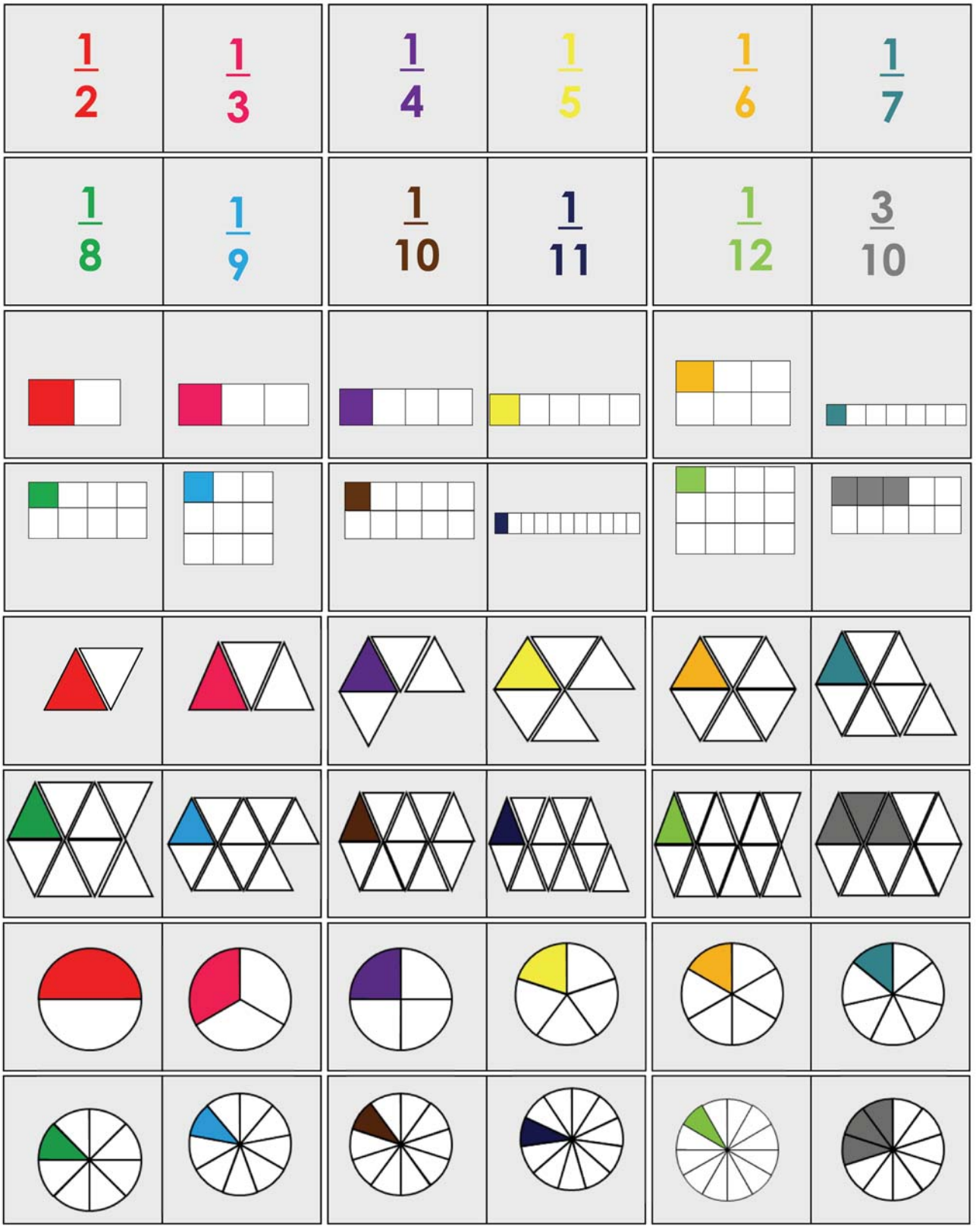
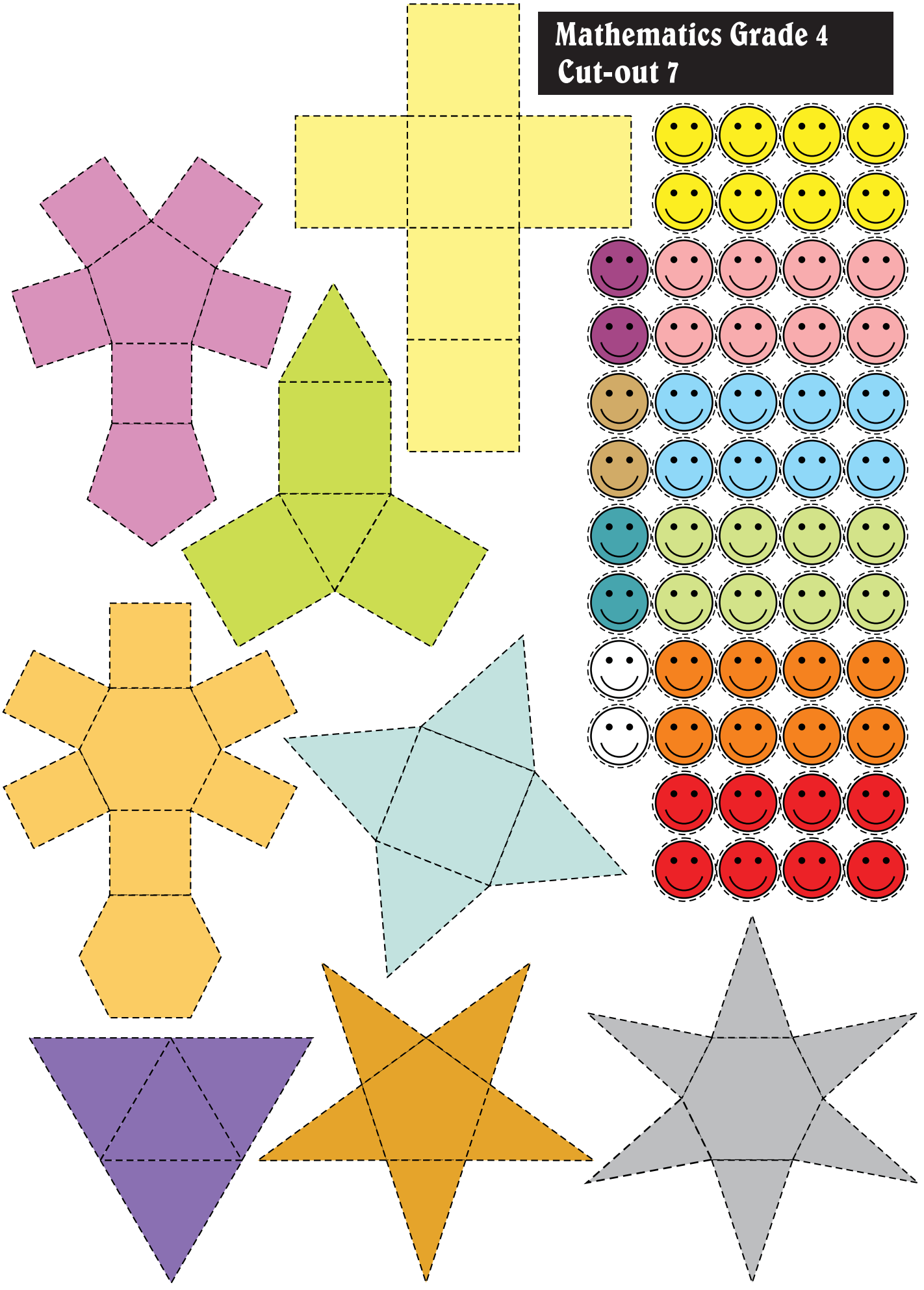
Fraction strips



Fraction dice






1/2
1/3
1/4
1/5
1/6
1/7
1/8
1/9
1/10
1/11
1/12
3/10

Mathematics Grade 4
Cut-out 7