



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

NATIONAL SENIOR CERTIFICATE NASIONALE SENIOR SERTIFIKAAT

GRADE/GRAAD 12

**MATHEMATICAL LITERACY P1
WISKUNDIGE GELETTERDHEID VI**

NOVEMBER 2018

MARKING GUIDELINES/NASIENRIGLYNE

MARKS/PUNTE: 150

| Symbol/Kode | Explanation/Verduideliking |
|-------------|---|
| M | Method/Metode |
| MA | Method with accuracy/Metode met akkuraatheid |
| CA | Consistent accuracy/Volgehoue akkuraatheid |
| A | Accuracy/Akkuraatheid |
| C | Conversion/Herleiding |
| S | Simplification/Vereenvoudiging |
| RT | Reading from a table/graph/document/diagram/Lees vanaf tabel/grafiek/document/diagram |
| SF | Correct substitution in a formula/Korrekte vervanging in 'n formule |
| O | Opinion/Explanation/Opinie/Verduideliking |
| P | Penalty, e.g. for no units, incorrect rounding off, etc./Penalisasie, bv. vir geen eenhede, verkeerde afronding, ens. |
| R | Rounding off/Afronding |
| NPR | No penalty for rounding/Geen penalisasie vir afronding nie |
| AO | Answer only/Slegs antwoord |
| MCA | Method with constant accuracy/Metode met volgehoue akkuraatheid |

**This marking guideline consists of 20 pages.
Hierdie nasienriglyne bestaan uit 20 bladsye.**

| | | |
|--------------------------------|---|-------------|
| APPROVED ON 4 November 2018 | External Moderators (Question Paper) | |
| | M.M. Tshabalala | E.D. Cronje |
| | L.R. de Waal Internal Moderator | |

NOTE:

- If a candidate answers a question TWICE, only mark the FIRST attempt.
- If a candidate has crossed out (cancelled) an attempt to a question and NOT redone the solution, mark the crossed out (cancelled) version.
- Consistent accuracy (CA) applies in ALL aspects of the marking guidelines; however it stops at the second calculation error.
- If the candidate presents any extra solution when reading from a graph, table, layout plan and map, then penalise for every extra incorrect item presented.

LET WEL:

- As 'n kandidaat 'n vraag TWEE KEER beantwoord, merk slegs die EERSTE poging.
- As 'n kandidaat 'n antwoord van 'n vraag doodtrek (kanselleer) en nie oordoen nie, merk die doodgetrekte (gekanselleerde) poging.
- Volgehoue akkuraatheid (CA) word in ALLE aspekte van die nasienriglyne toegepas, dit hou op by die tweede berekeningsfout.
- Wanneer 'n kandidaat aflesings vanaf 'n grafiek, tabel, uitlegplan en kaart geneem en ekstra antwoorde gee, penaliseer vir elke ekstra verkeerde item.

| QUESTION/VRAAG 1 [32 MARKS/PUNTE] ANSWER ONLY FULL MARKS | | | |
|---|---|--|----------------|
| Q/V | Solution/Oplossing | Explanation/Verduideliking | T&L |
| 1.1.1 | 1 / one / een ✓✓A OR/OF A day / 'n dag ✓✓A OR/OF One day / Een dag ✓✓A | 2A for correct day (2) | M L1 |
| 1.1.2 | Price before saving / Prys voor besparing $R70 + R250$ ✓M $= R320$ ✓A | 1M adding correct values 1A simplification (2) | F L1 |
| 1.1.3 | Ariel ✓✓A | 2A product (2) | F L1 |
| 1.1.4 | $750 \text{ m } \ell \div 1\,000$ ✓MA $= 0,75 \text{ } \ell$ ✓A OR/OF $750 \text{ m } \ell \times 0,001$ ✓MA $= 0,75 \text{ } \ell$ ✓A | 1MA for dividing by 1 000 1A simplification only if division OR/OF 1MA for multiplying by 0,001 1A simplification only if multiplied (2) | M L1 |
| 1.1.5 | Price / Prys $= R11 \times 3$ ✓MA $= R33,00$ ✓CA | 1MA multiplying correct values 1CA simplification (only if $R7,70 \times 3$) (2) | F L1 |

| Q/V | Solution/Oplissing | Explanation/Verduideliking | T&L |
|-------|--|---|----------|
| 1.1.6 | R11; R15; R18; R22; R30; R43; R44; R45; R65; R250 ✓✓A | 2A arranging in correct order If names used max 1 mark (2) | D L1 |
| 1.2.1 | English = 35 letters OR 15 letters ✓✓A Afrikaans = 37 letters OF 17 letters ✓✓A | 2A correct number WC, FS, NC Provinces accept both (2) | M L1 |
| 1.2.2 | 44 °C ✓✓A | 2A correct reading Accept 44 - 45 °C (2) | M L1 |
| 1.2.3 | One unit on the drawing represents twenty five units in reality / <i>Een eenheid op die tekening verteenvoordig vyf en twintig eenhede in werklikheid.</i> ✓✓A OR/OF Scale in this context means that the drawing of the T-shirt is 25 times smaller than in reality / <i>Skaal in hierdie konteks beteken dat die tekening van die T-hemp 25 keer kleiner is as in werklikheid.</i> ✓✓A OR/OF On the picture the shirt is 25 times smaller / <i>Op die foto is die hemp 25 keer kleiner</i> ✓✓A | 2A correct definition Accept no units (2) | MP L1 |
| 1.2.4 | ± 61 mm ✓✓A | 2A correct measurement (Accept 59 mm – 64 mm) Correct answer in cm = max 1 mark (2) | M L1 |

| Q/V | Solution/Oplissing | Explanation/Verduideliking | T&L |
|-------|---|---|-------------|
| 1.3.1 | Two Oceans Marathon / <i>Twee Oseane-marathon</i> ✓✓RT | 2RT reading from table Accept: Race on 15 April 2017 Race of 56 km Race with an entry fee of R520,00 (2) | M L1 |
| 1.3.2 | Comrades Marathon / <i>Comrades-marathon</i> ✓✓RT | 2RT reading from table Accept: Race on 4 June 2017 Race of 89 km Race with an entry fee of R460,00 (2) | M L1 |
| 1.3.3 | R520,00 – R460,00 ✓RT = R60,00 ✓A | 1RT correct values from the table 1A answer (2) | F L1 |
| 1.4.1 | 12 Hours / <i>12 Ure</i> ✓✓A OR/OF Half a day / <i>Halwe dag</i> ✓✓A | 2A correct time Accept: 12:00 OR/OF 12 o'clock Max 1 mark (2) | M L1 |
| 1.4.2 | Discrete / <i>Diskreet</i> ✓✓A | 2A discrete (2) | D L1 |
| 1.4.3 | ✓RT 17 031 : 13 852 ✓A | 1RT correct values from table 1A correct values in correct order Accept answer as unit ratios: 1 : 0,813 1,229 : 1 Accept answer in fraction form NPR (2) | D L1 |
| | | | [32] |

| QUESTION/VRAAG 2 [41 MARKS/PUNTE] | | | |
|--|---|--|----------------|
| Q/V | Solution/Oplissing | Explanation/Verduideliking | T&L |
| 2.1.1 | <p style="text-align: right;">✓A</p> <p>Interest refers to the amount that will be added to an account that is not settled yet / ✓A <i>Rente verwys na die bedrag wat by die agterstallige bedrag gevoeg word.</i></p> <p style="text-align: center;">OR/OF</p> <p style="text-align: center;">✓A ✓A</p> <p>Extra amount is charged on the late payments / <i>Ekstra bedrag wat gehef word op laat betalings.</i></p> <p style="text-align: center;">OR/OF</p> <p style="text-align: center;">✓A ✓A</p> <p>Extra money to be charged on overdue fees / <i>Ekstra geld wat op agterstallige gelde gehef word.</i></p> <p style="text-align: center;">OR/OF</p> <p style="text-align: center;">✓A ✓A</p> <p>Money charged for not paying fees on time / <i>Geld gehef vir fooie nie betyds betaal nie.</i></p> <p style="text-align: center;">OR/OF</p> <p style="text-align: center;">✓A</p> <p>Interest in this context is the charge levied because of unpaid fees or late payment of fees / ✓A <i>Dit is ekstra geld wat gehef word omdat die rekening nie op tyd betaal word nie.</i></p> | <p>1A amount charged 1A reason</p> <p style="text-align: right;">(2)</p> | F L1 |
| 2.1.2 | R14 819,50 ✓✓RT | 2RT balance | F L1 |
| 2.1.3 | <p style="text-align: center;">✓RT</p> $\frac{148,20}{14\ 819,50} \times \frac{100}{1} \% \quad \checkmark M$ <p>= 1,000033739329937 ≈ 1% ✓CA</p> | <p>1RT correct values 1M multiply by 100</p> <p>1CA answer</p> <p style="text-align: right;">(3)</p> | F L2 |

| Q/V | Solution/Oplissing | Explanation/Verduideliking | T&L |
|-------|---|---|---------|
| 2.1.4 | \checkmark RT APG 2039W Design & Theory Studio II \checkmark RT | 1RT code 1RT name If APG omitted = full marks (2) | F L1 |
| 2.1.5 | \checkmark RT $R14\ 967,70 - R8\ 650,00$ \checkmark M $= R6\ 317,70$ | 1RT correct values 1M subtracting deposit (2) | F L1 |
| 2.1.6 | <p>Total amount / <i>Totale bedrag</i> \checkmarkRT \checkmarkM $= R3\ 030 + R3\ 030 + R2\ 280 + R2\ 280 + R9\ 580 +$ $R4\ 530 + R29\ 460 + R2\ 087 + R395,95 +$ $R395,95$ $= R57\ 068,90$ \checkmarkCA</p> <p style="text-align: center;">OR/OF</p> <p>Total amount / <i>Totale bedrag</i> \checkmarkM \checkmarkRT $= R62\ 594 - R6\ 317,70 + 2 \times R395,95$ $= R57\ 068,90$ \checkmarkCA</p> <p style="text-align: center;">OR/OF</p> <p>Total amount / <i>Totale bedrag</i> \checkmarkRT \checkmarkM $R40\ 386 + R23000 + R8650 - R14819,50 -$ $R148,50 = R57\ 068,90$ \checkmarkCA</p> <p style="text-align: center;">OR/OF</p> <p>Total amount / <i>Totale bedrag</i> \checkmarkRT \checkmarkM $R3\ 030 + R3\ 030 + R2\ 280 + R2\ 280 + R9\ 580 +$ $R4\ 530 + R29\ 460 + R395,95 + R395,95$ $= R54\ 981,90$ \checkmarkCA</p> <p style="text-align: center;">OR/OF</p> <p>Total amount / <i>Totale bedrag</i> \checkmarkM \checkmarkRT $= R62\ 594 - R6\ 317,70 + 2 \times R395,95 - R2\ 087$ $= R54\ 981,90$ \checkmarkCA</p> <p style="text-align: center;">OR/OF</p> | <p>AO</p> <p>1RT reading all correct values 1M adding values 1CA simplification</p> <p style="text-align: center;">OR/OF</p> <p>1RT reading all correct values 1M subtracting values 1CA simplification</p> <p style="text-align: center;">OR/OF</p> <p>1RT reading all correct values 1M subtracting values 1CA simplification</p> <p style="text-align: center;">OR/OF</p> <p>1RT reading all correct values 1M adding values 1CA simplification</p> <p style="text-align: center;">OR/OF</p> <p>1RT reading all correct values 1M subtracting values 1CA simplification</p> <p style="text-align: center;">OR/OF</p> | F L1 |

| Q/V | Solution/Oplissing | Explanation/Verduideliking | T&L |
|-----|---|---|-----|
| | <p>Total amount / <i>Totale bedrag</i> \checkmarkRT \checkmarkM $R40\ 386 + R23000 + R8650 - R14819,50 -$ $R148,50 - R2\ 087 = R54\ 981,90 \checkmark$CA</p> | <p>1RT reading all correct values 1M subtracting values 1CA simplification</p> | |
| | <p>AFRIKAANS VRAESTEL:</p> <p>\checkmarkRT \checkmarkM $R148,20 + R3030 + R3030 + R2280 + R2280 +$ $R9580 + R4530 + R29460 + R2087 + R395,95 +$ $R395,95 = R57\ 217,10 \checkmark$CA</p> <p>OR/OF</p> <p>\checkmarkRT \checkmarkM $R40\ 386 + R23000 + R8650 - R14819,50$ $= R57\ 217,10 \checkmark$CA</p> <p>OR/OF</p> <p>\checkmarkM \checkmarkRT $R62\ 594,70 - R6317,70 + 2 \times R395,95 +$ $R148,20$ $= R57\ 217,10 \checkmark$CA</p> <p>OR/OF</p> <p>\checkmarkRT \checkmarkM $R148,20 + R3030 + R3030 + R2280 + R2280 +$ $R9580 + R4530 + R29460 + R395,95 + R395,95$ $= R55\ 130,10 \checkmark$CA</p> <p>OR/OF</p> <p>\checkmarkRT \checkmarkM $R40\ 386 + R23000 + R8650 - R14819,50 -$ $R2\ 087$ $= R55\ 130,10 \checkmark$CA</p> <p>OR/OF</p> <p>\checkmarkM \checkmarkRT $R62\ 594,70 - R6317,70 + 2 \times R395,95 +$ $R148,20 - R2\ 087$ $= R55\ 130,10 \checkmark$CA</p> | <p>1RT reading all correct values 1M adding values 1CA simplification</p> <p>OR/OF</p> <p>1RT reading all correct values 1M subtracting values 1CA simplification</p> <p>OR/OF</p> <p>1RT reading all correct values 1M subtracting values 1CA simplification</p> <p>OR/OF</p> <p>1RT reading all correct values 1M subtracting values</p> <p>1CA simplification</p> <p>OR/OF</p> <p>1RT reading all correct values 1M adding values 1CA simplification</p> <p>OR/OF</p> <p>1RT reading all correct values 1M subtracting values 1CA simplification</p> | |
| | | | (3) |

| Q/V | Solution/Oplissing | Explanation/Verduideliking | T&L | |
|---------------------|---|---|---------------------|---------|
| 2.1.7 | Direct deposit / <i>Direkte deposito</i> ✓✓RT | 2RT reading correctly <table border="1" data-bbox="986 383 1297 421"><tr><td>Accept deposit only</td></tr></table> (2) | Accept deposit only | F L1 |
| Accept deposit only | | | | |
| 2.1.8 | <p>Monthly instalment / <i>Maandelikse paaiement</i> $R40\,386,60 \div 5$ ✓A ✓M = R8 077,32</p> <p style="text-align: center;">OR/OF</p> <p>Monthly instalment / <i>Maandelikse paaiement</i> $R8\,077,32 \times 5$ ✓A ✓M = R40 386,60</p> <p style="text-align: center;">OR/OF</p> <p>Monthly instalment / <i>Maandelikse paaiement</i> $\frac{R40\,386,60}{R8\,077,32}$ ✓M = 5 ✓A</p> | <p>1A calculating 5 1M dividing by 5</p> <p style="text-align: center;">OR/OF</p> <p>1A calculating 5 1M multiply by 5</p> <p style="text-align: center;">OR/OF</p> <p>1M dividing correct values in correct order 1A calculating 5</p> <p style="text-align: right;">(2)</p> | F L1 | |
| 2.2.1 | <p style="text-align: center;">✓A</p> <p>Inflation is a measure of rate at which the cost of goods is changing over a period of time and is usually expressed as a percentage / ✓A <i>Inflasie is die meting van die koers waarteen die prys van goedere verander oor 'n tydperk en word gewoonlik uitgedruk in persentasie.</i></p> <p style="text-align: center;">OR/OF</p> <p style="text-align: center;">✓A</p> <p>The percentage increase of the food prices over the period 1970 – 2015 / ✓A <i>Die persentasietoename van kospryse oor die tydperk 1970 – 2015.</i></p> <p style="text-align: center;">OR/OF</p> <p style="text-align: center;">✓A ✓A</p> <p>Percentage increase of price over a period of time / <i>Persentasie verhoging van prys oor 'n tydperk.</i></p> <p style="text-align: center;">OR/OF</p> <p style="text-align: center;">✓A ✓A</p> <p>Inflation is the rising price of goods/items over time / <i>Inflasie is die stygende prys van goedere/dienste oor tyd.</i></p> | <p>1A percentage increase 1A time</p> <p style="text-align: right;">(2)</p> | F L1 | |

| Q/V | Solution/Oplissing | Explanation/Verduideliking | T&L |
|-------|---|---|---------|
| 2.2.2 | R0,30 OR/OF 30c ✓✓RT | 2RT correct value <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> Accept 0,30 If the candidates only wrote 30 = max 1 mark </div> | F L1 |
| | | (2) | |
| 2.2.3 | $\begin{array}{l} \checkmark M \\ R557,00 - R418,00 \checkmark RG \\ = R139,00 \checkmark CA \end{array}$ | AO 1RG correct amount 1M subtracting 1CA simplification (one of the 2 values must be correct) | F L1 |
| | | (3) | |
| 2.2.4 | Percentage change / <i>Presentasieverandering</i> $\frac{R75,00 - R0,25}{R0,25} \times \frac{100}{1} \% \checkmark SF$ $= 29\ 900 \% \checkmark CA$ <p style="text-align: center;">OR/OF</p> Percentage change / <i>Presentasieverandering</i> $\frac{75}{0,25} \times 100\% = 30\ 000\% \checkmark M$ Therefore % increase = 30 000% - 100% $= 29\ 900\% \checkmark CA$ | AO 1RT all correct values 1SF substitute correct values 1CA correct percentage <p style="text-align: center;">OR/OF</p> 1RT all correct values 1M subtracting 1CA correct percentage | F L2 |
| | | (3) | |

| Q/V | Solution/Oplissing | Explanation/Verduideliking | T&L |
|-------|---|--|--------------------|
| 2.2.5 | <p>Cost price / <i>Kosprys</i></p> $\frac{100}{117,5} \times \frac{104,90}{1} \quad \checkmark \text{MA}$ $= \text{R}89,28 \quad \checkmark \text{A}$ <p style="text-align: center;">OR/OF</p> <p>Cost price / <i>Kosprys</i></p> $\frac{104,90}{117,5\%} \quad \checkmark \text{MA}$ $= \text{R}89,28 \quad \checkmark \text{A}$ <p style="text-align: center;">OR/OF</p> <p>Cost price / <i>Kosprys</i></p> $\frac{104,90}{1,175} \quad \checkmark \text{MA}$ $= \text{R}89,28 \quad \checkmark \text{A}$ <p style="text-align: center;">OR/OF</p> <p>Cost price / <i>Kosprys</i></p> $\frac{17,5}{117,5} \times \text{R}104,90 = \text{R}15,62$ $\text{R}104,90 - \text{R}15,62 \quad \checkmark \text{MA}$ $= \text{R}89,28 \quad \checkmark \text{A}$ | <p>AO</p> <p>1MA multiplying correct values</p> <p>1A answer</p> <p style="text-align: center;">OR/OF</p> <p>1MA dividing correct values in the correct order</p> <p>1A answer</p> <p style="text-align: center;">OR/OF</p> <p>1MA dividing correct values in the correct order</p> <p>1A answer</p> <p style="text-align: center;">OR/OF</p> <p>1MA multiplying and subtracting correct values</p> <p>1A answer</p> <p style="text-align: right;">(2)</p> | <p>F</p> <p>L2</p> |
| 2.3.1 | <p>$\checkmark \checkmark \text{A}$</p> <p>B OR/OF R241 600 000 000 $\checkmark \checkmark \text{A}$</p> | <p>2A correct value</p> <p style="text-align: right;">(2)</p> | <p>F</p> <p>L1</p> |

| Q/V | Solution/Oplissing | Explanation/Verduideliking | T&L |
|-------|---|--|---------|
| 2.3.2 | <p>Budget is the proposed way in which money will be spent on different items / <i>Begroting is die voorgestelde manier hoe die geld vir verskillende items gespandeer behoort te word.</i> ✓✓A</p> <p style="text-align: center;">OR/OF</p> <p>A plan on how money is going to be spent on estimated income / <i>'n Plan oor hoe geld op beraamde inkomste bestee gaan word.</i> ✓✓A</p> <p style="text-align: center;">OR/OF</p> <p>A plan in how money is going to be spent / <i>'n Plan hoe geld uitgegee / spandeer gaan word.</i> ✓✓A</p> <p style="text-align: center;">OR/OF</p> <p>Financial plan how to spend money/finance / <i>Finansiële plan hoe om geld / finansiering te spandeer.</i> ✓✓A</p> <p style="text-align: center;">OR/OF</p> <p>Estimated income and expenditure of money / <i>Geskatte inkomste en uitgawes van geld.</i> ✓✓A</p> | <p>2A definition</p> <p>(2)</p> | F L1 |
| 2.3.3 | <p>Skills development levy institutions / <i>Vaardigheidsontwikkelingheffingsinstellings</i> ✓✓RT</p> | <p>2RT correct sector</p> <p>(2)</p> | F L1 |
| 2.3.4 | <p>Percentage of the total education budget / <i>Persentasie van die totale onderwysbegroting</i> ✓RG/RT</p> $\frac{15,3}{320,5} \times 100\% \checkmark M$ $= 4,77\% \checkmark CA$ <p style="text-align: center;">OR/OF</p> <p>Percentage of the total education budget / <i>Persentasie van die totale onderwysbegroting</i> ✓RG/RT</p> $\frac{R15\,300\,000\,000}{R320\,500\,000\,000} \times \frac{100}{1} \% \checkmark M$ $= 4,77\% \checkmark CA$ | <p>1RG/RT correct values 1M multiply by 100</p> <p>1CA answer</p> <p style="text-align: center;">OR/OF</p> <p>1RG/RT correct values 1M multiply by 100 1CA answer NPR</p> <p>(3)</p> | F L2 |

| Q/V | Solution/Oplissing | Explanation/Verduideliking | T&L |
|-------|---|--|-----------------|
| 2.3.5 | <p>Education Administration plus NSFAS amount to 31,1 billion rand / <i>Onderwysadministrasie plus NSFAS bedrag tot 31,1 miljard rand</i></p> <p>9,7% ✓✓A Accept any estimation from 9,5% but less than 9,86% <i>Aanvaar enige skatting vanaf 9,5% maar minder as 9,86%</i></p> <p style="text-align: center;">OR/OF</p> <p>15,8 + 15,3 = 31,1 billion / <i>miljard</i> ✓M = 9,7% ✓A Accept any estimation from 9,5% but less than 9,86% <i>Aanvaar enige skatting vanaf 9,5% maar minder as 9,86%</i></p> | <p>AO</p> <p>2A correct estimation</p> <p style="text-align: center;">OR/OF</p> <p>1M adding values 1A estimated value</p> <p style="text-align: right;">(2)</p> | <p>F L2</p> |
| | | | [41] |

| QUESTION/VRAAG 3 [18 MARKS/PUNTE] | | | |
|--|---|--|----------------|
| Q/V | Solution/Oplissing | Explanation/Verduideliking | T&L |
| 3.1.1 | $15 \text{ cm} + 17 \text{ cm} + 19 \text{ cm} + 21 \text{ cm} \checkmark A$ $= 72 \text{ cm} \times 10 \checkmark CA$ $= 720 \text{ mm} \checkmark CA$ | 1A adding of correct values 1CA conversion 1CA answer in mm (3) | M L1 |
| 3.1.2a | Diameter / <i>Deursnee</i> = $2 \times \text{radius}$ $= 2 \times 14 \text{ cm} \checkmark M$ $= 28 \text{ cm} \checkmark A$ | AO 1M multiplying by 2 1A diameter (2) | M L1 |
| 3.1.2b | Volume of a cylinder = $\pi \times r^2 \times \text{height}$ <i>Volume van 'n silinder = $\pi \times r^2 \times \text{hoogte}$</i> Volume of a cylinder = $3,142 \times (14)^2 \times 15 \text{ cm} \checkmark SF$ $= 3,142 \times 196 \text{ cm}^2 \times 15 \text{ cm} \checkmark S$ $= 9\,237,48 \text{ cm}^3 \checkmark CA$ | AO 1SF substitution 1S squaring 14 1CA simplification (3) | M L2 |
| 3.1.3 | The perimeter of a shape is the total distance around the edges defining the outline of that shape / $\checkmark \checkmark A$ <i>Die omtrek van 'n vorm is die totale afstand om die sye wat die uitleg van die vorm definieer.</i> <p style="text-align: center;">OR/OF</p> Total distance around the shape / <i>Totale afstand rondom 'n voorwerp</i> $\checkmark \checkmark A$ | 2A explanation (2) | M L1 |
| 3.1.4 | Area of a rectangle = length \times width <i>Area van 'n reghoek = lengte \times breedte</i> $= 15 \text{ cm} \times 12 \text{ cm} \checkmark SF$ $= 180 \text{ cm}^2 \checkmark CA$ | 1SF correct substitution 1CA simplification <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> $35 \text{ cm} \times 33 \text{ cm} = 1\,155 \text{ cm}^2$ Max 1 mark </div> (2) | M L2 |
| 3.2.1 | Amount / <i>Hoeveelheid</i> in kg = $3,5 \div 2,25 \checkmark C$ $= 1,556 \checkmark A$ | 1C conversion 1A simplification <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> Accept 1,56 kg ; 1,6 kg 1,5 only = 0 marks </div> (2) | M L2 |

| Q/V | Solution/Oplissing | Explanation/Verduideliking | T&L |
|------------|--|--|----------------|
| 3.2.2 | $1 \text{ ml flour} = 0,7 \text{ g flour} / 1 \text{ ml meel} = 0,7 \text{ g meel}$ $\frac{625}{1} \times 0,7 \text{ g} \quad \checkmark \text{C}$ $= 437,5 \text{ g} \quad \checkmark \text{A}$ | 1C conversion 1A simplification (2) | M L2 |
| 3.2.3 | $^{\circ}\text{C} = (^{\circ}\text{F} - 32^{\circ}) \div 1,8$ $^{\circ}\text{C} = (356^{\circ} - 32^{\circ}) \div 1,8 \quad \checkmark \text{SF}$ $^{\circ}\text{C} = (324^{\circ}) \div 1,8$ $= 180^{\circ}\text{C} \quad \checkmark \text{A}$ | 1SF correct substitution 1A simplification (2) | M L2 |
| | | [18] | |

| QUESTION/VRAAG 4 [24 MARKS/PUNTE] | | | | |
|--|---|---|-------------------|----------|
| Q/V | Solution/Oplissing | Explanation/Verduideliking | T&L | |
| 4.1.1 | South West OR SW <i>Suidwes OF SW</i> ✓✓A | 2A direction (2) | MPL 2 | |
| 4.1.2 | Namaqua National Park / <i>Namakwa Nasionale Park</i> ✓✓RM | 2RM national Park (2) | MPL 1 | |
| 4.1.3 | ✓✓RM ✓RM Keimoes, Kakamas, Pofadder (Any 2 of the 3/ <i>enige 2 van die 3</i>) | 2RM first correct town 1RM second correct town (3) | MPL 1 | |
| 4.1.4 | Ratio scale OR number scale OR numerical scale <i>Verhoudingskaal OF nommerskaal OF getalskaal</i> ✓✓A | 2A ratio / number / numerical <table border="1" style="width: 100%;"><tr><td>Accept unit ratio</td></tr></table> (2) | Accept unit ratio | MP L1 |
| Accept unit ratio | | | | |
| 4.1.5 | ✓A Measured distance / <i>Gemete afstand</i> = 135 mm 1 : 3 007 874 135 mm × 3 007 874 ✓M = 406 062 990 mm $= \frac{406\,062\,990}{1\,000\,000}$ ✓C = 406 km ✓R OR/OF ✓A 13,5 cm × 3 007 874 ✓M $\frac{40606299\text{cm}}{100\,000}$ ✓C = 406,06299 km ≈ 406 km ✓R | 1A measures distance 1M using scale 1C conversion 1R to the nearest km (Range: 130 mm to 140 mm) OR/OF 1A measures distance 1M using scale 1C conversion 1R to the nearest km (Range: 13 cm to 14 cm) (4) | MPL 3 | |
| 4.2.1 | Voortrekker Road / <i>Voortrekkerstraat</i> ✓✓RM OR/OF N14 ✓✓RM | 2RM correct road (2) | MPL 1 | |

| Q/V | Solution/Oplissing | Explanation/Verduideliking | T&L |
|-------|--|--|----------|
| 4.2.2 | Rivier Street / <i>Rivierstraat</i> ✓✓RM | 2RM correct road (2) | MP L2 |
| 4.2.3 | Debs-Lodge / <i>Debs-Lodge</i> ✓✓RM | 2RM correct road (2) | MP L2 |
| 4.2.4 | Time / <i>Tyd</i> = $\frac{2,34 \text{ km}}{40 \text{ km/h}}$ ✓SF = 0,0585 h × 60 ✓C = 3,51 minutes ✓CA | 1SF calculating time 1C multiply by 60 1CA simplification NPR (3) | MP L2 |
| 4.2.5 | $P = \frac{13}{42}$ ✓A OR/OF 0,310 OR/OF 31% OR/OF ✓MA $1 - \frac{29}{42} = \frac{13}{42}$ ✓A | 1A numerator (independent) 1A denominator OR/OF 1MA subtracting from 1 1A simplification (2) | P L2 |
| | | [24] | |

| QUESTION/VRAAG 5 [35 MARKS/PUNTE] | | | |
|--|---|--|----------------|
| Q/V | Solution/Oplissing | Explanation/Verduideliking | T&L |
| 5.1.1 | <p>R2 085 600 000 ✓✓RT</p> <p style="text-align: center;">OR/OF</p> <p>R2 085,6 million / <i>miljoen</i> ✓✓RT</p> <p style="text-align: center;">OR/OF</p> <p>R2,0856 billion / <i>miljard</i> ✓✓RT</p> | <p>2RT correct amount</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> Table value = max 1 mark </div> <p style="text-align: right;">(2)</p> | D L1 |
| 5.1.2 | <p style="text-align: center;">✓RT</p> $\frac{R1\ 323 + R2\ 085,6 + R3\ 162 + R2\ 158 + R1\ 847 + R2\ 732}{6}$ <p style="text-align: right;">✓M</p> <p>million / <i>miljoen</i></p> <p style="text-align: right;">✓CA</p> <p>= R2 217 933 333 OR/OF R2 217,933333 million / <i>miljoen</i></p> | <p>AO</p> <p>1RT correct values</p> <p>1M concept of mean</p> <p>1CA simplification NPR</p> <p style="text-align: right;">(3)</p> | D L2 |
| 5.1.3 | <p style="text-align: center;">✓A ✓A</p> <p>Maximum = 46,1 thousand / <i>duisend</i></p> <p style="text-align: center;">OR/OF</p> <p>Maximum = 46 100 ✓✓RT</p> | <p>1A correct value 1A unit</p> <p style="text-align: center;">OR/OF</p> <p>2RT correct maximum</p> <p style="text-align: right;">(2)</p> | D L1 |
| 5.1.4 | <p style="text-align: center;">✓RT</p> $A = \frac{2\ 158\ 000\ 000}{3\ 441\ 000\ 000\ 000} \times \frac{100\%}{1}$ <p style="text-align: right;">✓M</p> <p>= 0,062714327% ✓CA = 0,06% ✓R</p> | <p>AO</p> <p>1RT correct values 1M multiply by 100 1CA simplification 1R rounding</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> If omitted zeros = max 3 marks </div> <p style="text-align: right;">(4)</p> | D L2 |
| 5.2.1 | <p>A person who is able and willing to work, but cannot find work / <i>'n Persoon wat geskik en gewillig is om te werk, maar nie 'n werk kry nie.</i> ✓✓A</p> <p style="text-align: center;">OR/OF</p> | <p>2A explanation</p> | D L1 |

| Q/V | Solution/Oplissing | Explanation/Verduideliking | T&L |
|-------|--|--|---------|
| | <p>People who are without work / <i>Mens wat sonder werk is</i> ✓✓A</p> <p style="text-align: center;">OR/OF</p> <p>People who are jobless / <i>Mense wat werkloos is</i> ✓✓A</p> <p style="text-align: center;">OR/OF</p> <p>Not earning a salary / wage / income <i>Verdien nie 'n salaris / loon / inkomste nie</i> ✓✓A</p> <p style="text-align: center;">OR/OF</p> <p>Retrenched / <i>Afgedank</i> ✓✓A</p> | <p>2A explanation</p> <p style="text-align: right;">(2)</p> | |
| 5.2.2 | <p>$X = 1\ 748 - 506$ ✓M $= 1\ 242$ ✓A</p> <p style="text-align: center;">OR/OF</p> <p style="text-align: center;">✓M</p> <p>$X = 16\ 172 - (1\ 391 + 806 + 4\ 991 + 2\ 513 + 1\ 417 + 321 + 999 + 2\ 492)$ $= 1\ 242$ ✓A</p> | <p>1M subtracting correct values 1A simplification</p> <p>1M subtracting correct values 1A simplification</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p>No penalty for including zeros</p> </div> <p style="text-align: right;">(2)</p> | D L1 |
| 5.2.3 | <p>Questionnaire / <i>vraelys</i> ✓✓A</p> <p style="text-align: center;">OR/OF</p> <p>Survey / <i>opname</i> ✓✓A</p> <p style="text-align: center;">OR/OF</p> <p>Population census / <i>populasie sensus</i> ✓✓A</p> <p style="text-align: center;">OR/OF</p> <p>Document analysis / <i>dokument analise</i> ✓✓A</p> <p style="text-align: center;">OR/OF</p> <p>Interview / <i>onderhoud</i> ✓✓A</p> | <p>2A correct answer</p> <p style="text-align: right;">(2)</p> | D L1 |

| Q/V | Solution/Oplossing | Explanation/Verduideliking | T&L |
|-------|--|---|---------|
| 5.2.4 | Percentage of people / <i>Persentasie mense</i> $\frac{1412\ 000}{4507\ 000} \times \frac{100}{1} \% \checkmark M$ $= 31,329 \% \checkmark CA$ | 1RT using both correct values 1M percentage calculation 1CA simplification <div style="border: 1px solid black; padding: 2px; width: fit-content;">If omitted zeros = full marks</div> NPR (3) | D L2 |
| 5.2.5 | $16\ 172\ 000 : 5\ 882\ 000$ $2,7494 : 1 \checkmark A$ | 1RT both correct values 1A ratio in unit form <div style="border: 1px solid black; padding: 2px; width: fit-content;">Accept: 2,749 / 2,75 / 2,7</div> (2) | D L2 |
| 5.2.6 | $\text{Probability (NEA)} = \frac{697\ 000}{1\ 893\ 000} \checkmark RT$ $= 0,368 \checkmark CA$ <p style="text-align: center;">OR/OF</p> $\text{Probability (NEA)} = \frac{697\ 000}{15\ 475\ 000} \checkmark RT$ $= 0,045 \checkmark CA$ <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>AFRIKAANS VRAESTEL</p> $\text{Probability (NEA)} = \frac{1\ 196\ 000}{1\ 893\ 000} \checkmark RT$ $= 0,63 \checkmark CA$ $\approx 0,6$ <p style="text-align: center;">OR/OF</p> $\text{Probability (NEA)} = \frac{1\ 196\ 000}{22\ 054\ 000} \checkmark RT$ $= 0,05 \checkmark CA$ $\approx 0,1$ </div> | AO 2RT correct values 1CA simplification <p style="text-align: center;">OR/OF</p> 2RT correct values 1CA simplification <p style="text-align: center;">OR/OF</p> 2RT correct values 1CA simplification <p style="text-align: center;">OR/OF</p> 2RT correct values 1CA simplification <div style="border: 1px solid black; padding: 2px; width: fit-content;">If omitted zeros = full marks</div> NPR (3) | P L2 |

| Q/V | Solution/Oplissing | Explanation/Verduideliking | T&L |
|-------|---|--|---------|
| 5.2.7 | <p>Do not mark this question.</p> <p><i>Moenie hierdie vraag merk nie.</i></p> | | |
| 5.2.8 | $\frac{3 \checkmark \checkmark A}{9 \checkmark A}$ $= \frac{1}{3} \checkmark CA$ | <p>AO</p> <p>2A numerator 1A denominator</p> <p>1CA simplification</p> <p>(4)</p> | P L3 |
| | | [35] | |
| | | TOTAL: 150 | |

Upscaling of Question 5 mark
Aanpassing van Vraag 5 punt

| QUESTION/VRAAG 5 | |
|------------------|----------------|
| Mark out of 29 | Mark out of 35 |
| 29 | 35 |
| 28 | 34 |
| 27 | 33 |
| 26 | 31 |
| 25 | 30 |
| 24 | 29 |
| 23 | 28 |
| 22 | 27 |
| 21 | 25 |
| 20 | 24 |
| 19 | 23 |
| 18 | 22 |
| 17 | 21 |
| 16 | 19 |
| 15 | 18 |
| 14 | 17 |
| 13 | 16 |
| 12 | 14 |
| 11 | 13 |

| QUESTION/VRAAG 5 | |
|------------------|----------------|
| Mark out of 29 | Mark out of 35 |
| 10 | 12 |
| 9 | 11 |
| 8 | 10 |
| 7 | 8 |
| 6 | 7 |
| 5 | 6 |
| 4 | 5 |
| 3 | 4 |
| 2 | 2 |
| 1 | 1 |