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## PREPARATORY EXAMINATION/ *VOORBEREIDENDE EKSAMEN*

### GRADE/GRAAD 12

### SEPTEMBER 2025

## MATHEMATICAL LITERACY P1/ *WISKUNDIGE GELETTERDHEID V1*

### MARKING GUIDELINE/*NASIENRIGLYNE*

### MARKS/*PUNTE*: 150

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

**This marking guideline consists of 19 pages./**

*Hiedie nasienriglyne bestaan uit 19 bladsye.*

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**NOTE:**

- If a candidate answers a question TWICE, only mark the FIRST attempt.
- If a candidate has crossed out (cancelled) an attempt at 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.
- Note: Consistent accuracy (CA) does NOT apply in cases of a breakdown.
- If the candidate presents any extra solution when reading from a graph, table, layout plan or map, then penalise for every extra item presented.
- As a general marking principle, if a candidate has incurred one mistake and there is evidence of sound mathematics thereafter, then that candidate should lose ONE mark only.

**LET WEL:**

- *As 'n kandidaat 'n vraag TWEE KEER beantwoord, sien slegs die EERSTE poging na.*
- *As 'n kandidaat 'n antwoord van 'n vraag doodtrek (kanselleer) en nie oordoen nie, sien die doodgetrekte (gekanselleerde) poging na.*
- *Volgehoue akkuraatheid (CA) word in ALLE aspekte van die nasienriglyne toegepas, dit hou op by die tweede berekeningsfout.*
- *Let wel: Volgehoue akkuraatheid (CA) geld NIE in die geval van 'n afbreuk NIE.*
- *Wanneer 'n kandidaat aflesings vanaf 'n grafiek, tabel, uitlegplan en kaart geneem het en ekstra antwoorde gee, penaliseer vir elke ekstra item.*
- *'n Algemene nasienbeginsel is dat, indien 'n kandidaat een fout maak en daarna voortgaan met korrekte wiskunde, die kandidaat slegs EEN punt verloor.*





| Q/V         | Solution/Oplissing                                                                                                                                                                                                                                                        | Explanation/Verduideliking                                                                                                                                                                       | T/L          |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 1.2.1       | Box and whisker plots/ <i>Mond-en-snordigram</i><br>✓✓A                                                                                                                                                                                                                   | 2A correct graph<br>(2)                                                                                                                                                                          | D<br>L1<br>E |
| 1.2.2       | 36<br>✓✓RT                                                                                                                                                                                                                                                                | 2RT maximum marks<br>(2)                                                                                                                                                                         | D<br>L1<br>E |
| 1.2.3       | 31 - 30 = 1<br>✓MA ✓A                                                                                                                                                                                                                                                     | 1MA subtracting correct values<br>1A simplification<br>(2)                                                                                                                                       | D<br>L1<br>E |
| 1.2.4       | $\% \text{ mark/punt} = \frac{33,5}{50} \times 100\%$ $= 67\%$ <p style="text-align: center;"><b>OR/OF</b></p> $\% \text{ mark/punt} = 2 \times 33,5$ $= 67\%$ <p style="text-align: center;"><b>OR/OF</b></p> $\% \text{ mark/punt} = \frac{67}{100} \times 50$ $= 33,5$ | 1RT value of Q1 (33,5)<br><br>1MA dividing by 50 and multiplied by 100%<br><br>1RT value of Q1 (33,5)<br>1MA multiplied by 2<br><br>1RT total marks (50)<br><br>1A value of Q1 (33,5)<br><br>(2) | D<br>L1<br>M |
| <b>[30]</b> |                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                  |              |





| Q/V   | Solution/Oplossing                                                                                                                                                                                                                                                                           | Explanation/Verduideliking                                                                                                                   | T/L          |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 1.3.1 | $\checkmark \checkmark A$<br>Value added tax/ <i>Belasting op toegevoegde waarde.</i>                                                                                                                                                                                                        | 2A correct concept<br>(2)                                                                                                                    | F<br>L1<br>E |
| 1.3.2 | $\checkmark MA$<br>$A = 7 \times R4\,950$<br>$= R\,34\,650,00.$ $\checkmark A$<br><br><b>OR/OF</b><br><br>$\checkmark MA$<br>$A = R36\,445 - (R750 + R1\,045)$<br>$= R34\,650,00$ $\checkmark A$                                                                                             | 1MA multiply correct values<br>1A value of A<br><br>1MA subtracting correct values from the sub-total<br>1A value of A<br><br><b>NPU</b> (2) | F<br>L1<br>E |
| 1.3.3 | $\checkmark \checkmark A$<br>15%/Fifteen percent/ <i>Vyftien persent</i>                                                                                                                                                                                                                     | 2RT correct percentage<br>(2)                                                                                                                | F<br>L1<br>E |
| 1.3.4 | VAT due/ <i>BTW verskuldig</i><br>$\checkmark RT$<br>$= R36\,445 \times \frac{15}{100}$ $\checkmark MA$<br>$= R5\,466,75$ $\checkmark A$                                                                                                                                                     | 1RT correct value<br>1MA multiplying by 15%<br>1A simplification<br>(3)                                                                      | F<br>L1<br>E |
| 1.3.5 | $\checkmark RT$ $\checkmark MA$<br>$1\,045 : 36\,445$<br>$209 : 7\,289 / 1 : 34,88 / 0,029 : 1$ $\checkmark A$<br><div style="border: 1px solid black; padding: 5px; width: fit-content;"> <b>Accept</b><br/>           1 : 35<br/>           1: 34,9<br/>           0,03 : 1         </div> | 1RT correct values<br>1MA correct order<br>1A simplification<br>(3)                                                                          | F<br>L1<br>M |
|       |                                                                                                                                                                                                                                                                                              |                                                                                                                                              | <b>[30]</b>  |





| QUESTION/VRAAG 2 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | [30 marks/PUNTE]                                                                                                                     |              |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Ques             | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Explanation                                                                                                                          | TL           |
| 2.1.1            | $B = R19,99 + R79,99 + R38,99 + R61,99 + R38,99 + R43,99 + R41,99 + R18,99 + R96,99$ $= R441,91$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <p>✓ MA</p> <p>1MA adding all correct values</p> <p>1A value of B</p> <p>AO</p> <p>(2)</p>                                           | F<br>L1<br>M |
| 2.1.2            | <p>Price of rice/Prys van rys</p> $= 396,91 - (17,99 + 69,99 + 34,99 + 59,99 + 32,99 + 39,99 + 17,99 + 79,99)$ $= R396,91 - R353,92$ $= R42,99$                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>✓ MA</p> <p>1MA adding all correct values</p> <p>1MA subtracting from the total</p> <p>1CA price of rice</p> <p>AO</p> <p>(3)</p> | F<br>L2<br>E |
| 2.1.3            | Spar ✓✓ RT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>CA from 2.1.1</p> <p>2RT correct store.</p> <p>(2)</p>                                                                            | F<br>L2<br>M |
| 2.1.4            | <ul style="list-style-type: none"> <li>Distance between the store and the supplier. To cover transportation costs/afstand tuseen die winkel die verskaffer.</li> <li>Location of the store/Ligging van die winkel.</li> <li>Store reputation or standard is good. Branding/Winkelreputasie of standaard.</li> <li>Franchised (range of prices accepted) retailer. Example: Spar is franchised./Eksklusiewe (reeks pryse aanvaar) kleinhandelaar. Voorbeeld: Spar is eksklusiewe kleinhandelaar.</li> <li>Quality of the goods (freshness/expiry date)/kwaliteit van goedere (varsheid/vervaldatum)</li> </ul> | <p>✓✓ O</p> <p>2O reason</p> <p>(2)</p>                                                                                              | F<br>L4<br>D |
| 2.1.5            | <p>Probability(non-food)/Waarskynlikheid (nie-voedsel nie)</p> $= \frac{2}{9}$ $= 0,22$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p>✓ MA</p> <p>1MA numerators and denominator</p> <p>1CA answer</p> <p>AO/NPR</p> <p>(2)</p>                                         | P<br>L2<br>M |

| Ques  | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Explanation           | TL           |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------|
| 2.1.6 | <p>✓✓ RT<br/>Maize Meal/<i>Mielmeel</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2RT correct food item | F<br>L2<br>M |
| 2.1.7 | <p>✓✓ O<br/>The grocery store/The retail shop may not be available in one's area of living./<i>Die kruidenierswinkel/kleinhandelwinkel is dalk nie in 'n mens se woongebied beskikbaar nie.</i></p> <p><b>OR/OF</b></p> <p>✓✓ O<br/>The conducive/convenient environment./<i>Die bevorderlike/gerief omgewing.</i></p> <p><b>OR/OF</b></p> <p>✓✓ O<br/>The treatment one receives at the shop./<i>Die behandeling wat mens by die winkel kry.</i></p> <p><b>OR/OF</b></p> <p>✓✓ O<br/>The security around the shop./<i>Die sekuriteit om die winkel.</i></p> | 2O reason             | F<br>L4<br>D |





| Ques         | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Explanation                                                                                                                                                                                                                                                                                 | TL           |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 2.2.1<br>(a) | <p>Annual taxable income/ <i>Jaarlikse belasbare inkomste</i></p> <p>✓ MA<br/> <math>= 13 \times R46\,294,08</math><br/> <math>= R601\,823,04</math> ✓ A</p> <p><b>OR</b></p> <p>Normal taxable income = <math>R46\,294,08 \times 12</math> ✓ MA<br/> <math>= R555\,528,96</math><br/> <math>\therefore R555\,528,96 + R46\,294,08</math><br/> <math>= R601\,823,04</math> ✓ A</p>                                                                                                                                                                                                                                 | <p>1MA multiplying monthly income by 13<br/>1A annual taxable income</p> <p>1MA multiplying monthly income by 12</p> <p>1A annual taxable income<br/><b>AO</b></p> <p>(2)</p>                                                                                                               | F<br>L2<br>M |
| 2.2.1<br>(b) | <p>✓✓ A</p> <p>Bracket 4/4/Four/Salary block Four/<br/><i>Kerf 4/4/vier/Salaris blok 4</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p><b>CA from 2.2.1 (a)</b></p> <p>2 CA correct tax brackets</p> <p>(2)</p>                                                                                                                                                                                                                 | F<br>L2<br>M |
| 2.2.2        | <p>Annum tax due/ <i>jaarlekse belasting verskuldig</i></p> <p>✓ RT      ✓ SF<br/> <math>= 121\,475 + \frac{36}{100} \times (601\,823,04 - 512\,800)</math><br/> <math>= 121\,475 + \frac{36}{100} \times (89\,023,04)</math><br/> <math>= 121\,475 + 32\,048,2944</math><br/> <math>= 153\,523,29</math> ✓ CA<br/> <math>- 17\,235</math> ✓ MA<br/> <math>= 136\,288,29</math> ✓ CA</p> <p>Monthly tax due/ <i>Maandelikse belasting verskuldig</i></p> <p><math>= \frac{R136\,288,2944}{12}</math><br/> <math>= R11\,357,36</math> ✓ CA</p> <p>The claim is VALID/ <i>Die bewering is</i> ✓ O <i>KORREK.</i></p> | <p><b>CA from 2.2.1 (a)</b></p> <p>1RT correct bracket<br/>1SF correct substitution</p> <p>1CA simplification<br/>1MA subtracting rebate<br/>1CA annual tax</p> <p><b>If learners work with bracket 1</b><br/>Allocate 4/7 marks</p> <p>1CA monthly tax</p> <p>1O conclusion</p> <p>(7)</p> | F<br>L4<br>D |



| Ques  | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Explanation | TL           |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------|
| 2.2.3 | <p style="text-align: center;">✓✓ O</p> <p>Contributing to a registered medical aid/scheme./Bydra tot 'n geregistreerde mediese fonds/skema</p> <p style="text-align: center;"><b>OR/OF</b></p> <p style="text-align: center;">✓✓ O</p> <p>Contributing toward a retirement annuity fund/Dra by tot 'n uittree-annuïteitsfonds.</p> <p style="text-align: center;"><b>OR/OF</b></p> <p>Donate to a registered charity organisation/donasie aan geregistreerde welsynsorganisasie</p>     | 2O reason   | F<br>L4<br>D |
| 2.2.4 | <p style="text-align: center;">✓✓ O</p> <p>To ensure that those who earn more contribute a greater share to the national coffers (or treasury)./Om te verseker dat diegene wat meer verdien 'n groter deel tot die nasionale koffers (of tesourie) bydra.</p> <p style="text-align: center;"><b>OR/OF</b></p> <p style="text-align: center;">✓✓ O</p> <p>It ensures fair contribution across different levels of income/Dit verseker billike bydrae oor verskillende inkomstevlakke.</p> | 2O reason   | F<br>L4<br>D |
|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | (2)         |              |
|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | (2)         |              |
|       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>[30]</b> |              |





| QUESTION 3/VRAAG 3 |                                                                                                                                                                                                                                                                  | [30 Marks/PUNTE]                                                                                              |              |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|--------------|
| Ques               | Solution                                                                                                                                                                                                                                                         | Explanation                                                                                                   | TL           |
| 3.1.1              | <p>✓✓A<br/>Thirty million seven hundred and fifty-four thousand nine hundred and thirty one/<i>Dertig miljoen sewehonderd vier en vyftig duisend negehonderd een en dertig.</i></p>                                                                              | <p>2A correct number in words<br/>(2)</p>                                                                     | D<br>L1<br>E |
| 3.1.2              | <p>✓A ✓A<br/>Multiple/compound bar graph./<i>saamgestelde staafgrafiek</i></p>                                                                                                                                                                                   | <p>1A multiple/compound<br/>1A bar graph<br/>(2)</p>                                                          | D<br>L1<br>E |
| 3.1.3              | <p>✓A ✓A<br/>2021 and/en 2022<br/><br/><b>Accept/Aanvaar: 2,79% and/en 3,8% [1 mark]</b><br/><br/><b>OR/OF</b><br/><br/>✓A ✓A<br/>2020 and/en 2021<br/><br/><b>Accept/Aanvaar: 0,11% and/en 2,79% [1 mark]</b></p>                                               | <p>1A 2021<br/>1A 2022<br/><br/><br/>1A 2020<br/>1A 2021<br/>(2)</p>                                          | D<br>L2<br>D |
| 3.1.4              | <p>Teenager pregnant/<i>Tienerswangerskappe</i><br/><br/><math display="block">= (30\,754\,931) \times \frac{1}{3} \times 3,8\% \checkmark \text{MA}</math><br/><math display="block">= 10\,251\,643,67 \times 3,8\%</math><br/><br/>389 562 or 389 563 ✓ CA</p> | <p>1MA multiplying population by <math>\frac{1}{3}</math> and 3,8%<br/><br/>1CA number of females<br/>(2)</p> | D<br>L3<br>M |
| 3.1.5 (a)          | <p>✓✓O<br/>Late registration from 2019./<i>Laar registrasies vir 2019</i></p>                                                                                                                                                                                    | <p>2O reason<br/>(2)</p>                                                                                      | D<br>L4<br>M |
| 3.1.5 (b)          | <p>✓✓O<br/>The number was too small./<i>Die getal was te klein</i><br/><br/><b>OR/OF</b><br/><br/>✓✓O<br/>14-year-olds did not fall pregnant/births not registered./<i>14-jariges was nie swanger nie/geboortes nie geregistreer nie.</i></p>                    | <p>2O reason<br/>(2)</p>                                                                                      | D<br>L4<br>M |



| Ques  | Solution                                                                                                                                                                                                                                                                                                                                  | Explanation                                                                                                                    | TL           |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|--------------|
| 3.1.6 | 2019 late registrations/2019 laat registrasie<br>$= 1\,003\,307 \times \frac{10,366}{100}$<br>$= 104\,002 \checkmark A$<br>2020 births/2020 geboortes<br>$= 1\,003\,307 - 104\,002$<br>$= 899\,305 \checkmark CA$<br>Non-teenage births/nie-tiener geboortes<br>$= 899\,305 - (35\,000 + 15) \checkmark MA$<br>$= 864\,290 \checkmark CA$ | 1A 2019 late registrations subtracting correct %<br>1CA 2020 births<br>1MA adding and subtracting<br>1CA simplification<br>(4) | D<br>L3<br>D |
| 3.2.1 | Growth chart/Groeikaart $\checkmark \checkmark A$                                                                                                                                                                                                                                                                                         | 2A correct graph<br>(2)                                                                                                        | D<br>L1<br>E |
| 3.2.2 | 75 <sup>th</sup> $\checkmark \checkmark RT$                                                                                                                                                                                                                                                                                               | 2RT correct percentile<br>(2)                                                                                                  | D<br>L1<br>E |
| 3.2.3 | $\checkmark RT$ $\checkmark O$ $\checkmark O$<br>75% of the other boys will weigh more than him and 25% will weigh less than him.<br>75% van die ander seuns sal meer weeg as hy en 25% sal minder weeg as hy.                                                                                                                            | 1RT 75 and 25<br>1O 75 more<br>1O 25 less<br>(3)                                                                               | D<br>L4<br>M |
| 3.2.4 | $\checkmark \checkmark A$<br>Q1/Lower quartile/Laer kwartiel                                                                                                                                                                                                                                                                              | 2A correct quartile<br>(2)                                                                                                     | D<br>L2<br>M |
| 3.2.5 | $\checkmark \checkmark O$<br>It helps you or your doctor, and any health professional to keep track of how your baby is growing./Dit help jou of jou dokter en enige gesondheidswerker om tred te hou met die groei van jou baba.                                                                                                         | 2O reason<br>(2)                                                                                                               | D<br>L4<br>M |
| 3.2.6 | Range/ Omvang<br>$\checkmark RT$<br>$= 75^{\text{th}} - 25^{\text{th}} \checkmark MA$<br>$= 50 \text{ percentiles above/persentiele bo} \checkmark CA$                                                                                                                                                                                    | 1RT identify the boy's position<br>1MA subtract correct values<br>1CA difference<br>(3)                                        | D<br>L2<br>M |
|       |                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                | [30]         |





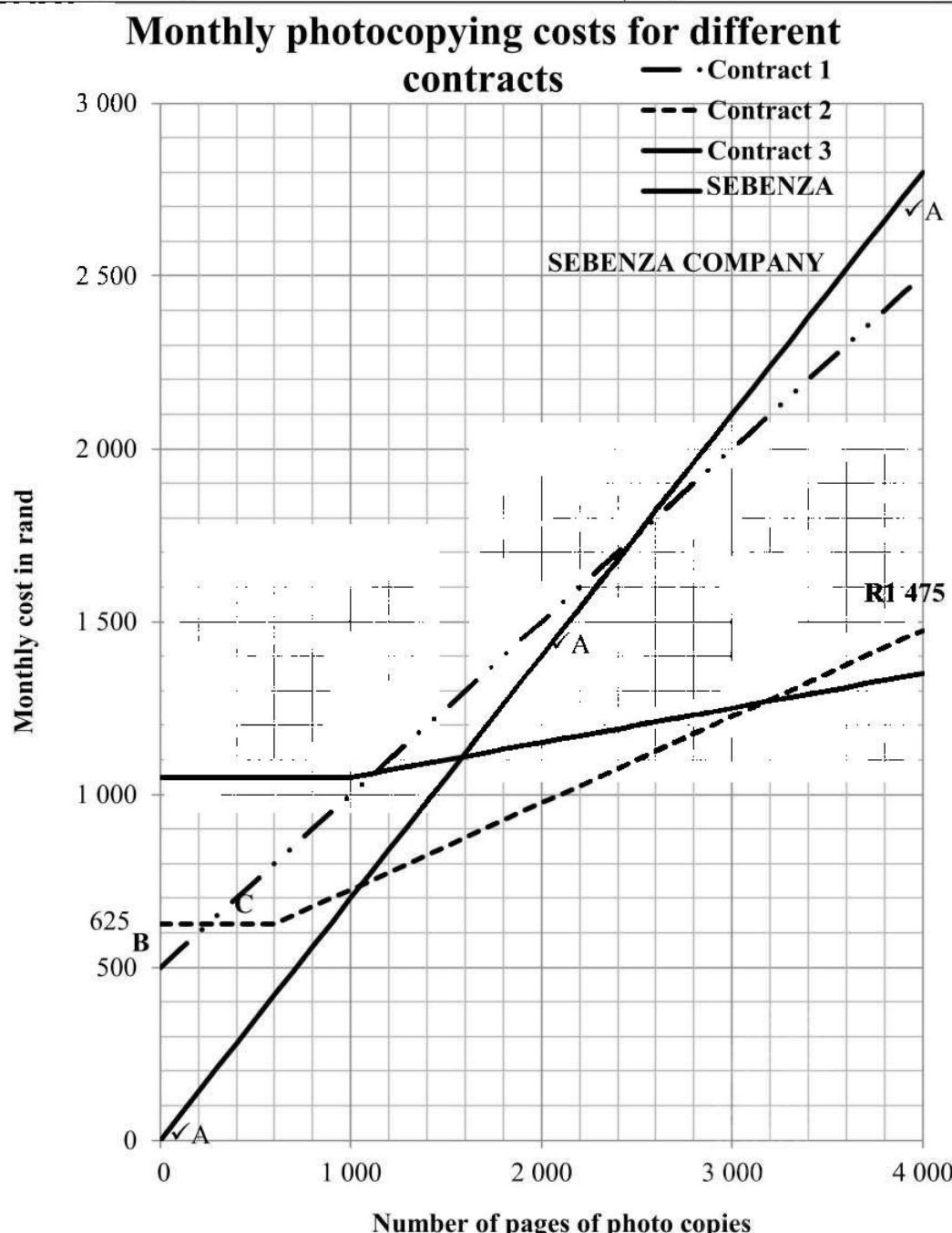
| QUESTION/VRAAG 4 |                                                                                                                                                                                                                                                                                                             | [36 MARKS/PUNTE]                                                                                                          |              |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|--------------|
| Q/V              | Solution/Oplissing                                                                                                                                                                                                                                                                                          | Explanation/Verduideliking                                                                                                | T&L          |
| 4.1.1            | $\checkmark\checkmark$ A<br>Continuous data/deurlopende data.<br>$\checkmark\checkmark$ A                                                                                                                                                                                                                   | 2A continuous<br>(2)                                                                                                      | D<br>L1<br>M |
| 4.1.2            | No mode/none/Geen modus nie/geen                                                                                                                                                                                                                                                                            | 2A no mode<br>(2)                                                                                                         | D<br>L1<br>E |
| 4.1.3<br>(a)     | $\checkmark$ MA<br>44 ; 48,8 ; 50 ; 51 ; 52 ; 53,7 ; 54 ; 56 ; 56,1 ; 56,6<br>Median/Mediaan<br>$\therefore (52 + 53,7) \div 2$ $\checkmark$ MA<br>$= 52,85/52,9$ $\checkmark$ CA<br><div style="border: 1px solid black; padding: 2px; display: inline-block;">Median of correct unarranged data 2/3</div> | 1MA ascending/descending<br><br>1MA adding and dividing by 2<br>1CA median<br>AO<br>(3)                                   | D<br>L2<br>E |
| 4.1.3<br>(b)     | $44,35 = \frac{40 + 41 + 42 + 42,5 + 46 + 46 + 2C + 53 + 53}{10}$<br>$44,35 = \frac{363,5 + 2C}{10}$ $\checkmark$ MA<br>$10 \times 44,35 = 363,5 + 2C$<br>$2C = 443,5 - 363,5$ $\checkmark$ S<br>$\therefore C = \frac{80}{2}$<br>$C = 40$ $\checkmark$ CA                                                  | 1MA adding all weights and mean concept<br><br>1MA changing the subject of the formula<br><br>1CA value of C<br>AO<br>(3) | D<br>L2<br>E |
| 4.1.4            | IQR = Upper quartile – Lower quartile<br>IKR = Boonste kwarftiel – Onderste kwarftiel<br>$= Q_3 - Q_1$<br>$6,9 = 57 - Q_1$ $\checkmark$ SF<br>$Q_1 = 57 - 6,9$ $\checkmark$ MA<br>$= 50,1$ $\checkmark$ CA                                                                                                  | 1SF correct substitution<br><br>1MA changing the subject of the formula<br>1CA lower quartile.<br>(3)                     | D<br>L3<br>E |





| Q/V   | Solution/Oplossing                                                                                                                                                                                                                                           | Explanation/Verduideliking                                                                                                                                                                    | T&L          |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 4.2.1 | 1 100 ✓✓ RT<br>[Accept values from 1 050 to 1 100]/<br>[Aanvaar waardes van 1 050 tot 100]                                                                                                                                                                   | 2RT number of copies<br>(2)                                                                                                                                                                   | F<br>L2<br>M |
| 4.2.2 | ✓✓ O<br>The monthly cost do not change with the number of<br>copies made/Die uitgawes verander nie met die<br>aantal kopieë gemaak nie.                                                                                                                      | 2O correct explanation<br>(2)                                                                                                                                                                 | F<br>L2<br>M |
| 4.2.3 | Contract 3/Kontrak 3 ✓✓ RT                                                                                                                                                                                                                                   | 2RT correct contract<br>(2)                                                                                                                                                                   | F<br>L2<br>E |
| 4.2.4 | Total cost/Totale koste<br><br>✓RT ✓✓A ✓A ✓A<br>= R625 + R0,25 (number of copies – 600)<br><br><b>OR/OF</b><br><br>Total cost/Totale koste<br><br>✓RT ✓✓A ✓A<br>= R625 + R0,25 (n – 600) ✓A<br>where n is the number of copies/waar n die aantal<br>bladsye. | 1RT constant cost (R625)<br>2A R0,25<br>1A number of copies<br>1A minus 600<br><br><br><br><br><br><br><br>1RT constant cost (R625)<br>2A R0,25<br>1A number of copies<br>1A minus 600<br>(5) | F<br>L4<br>D |



| Q/V   | Solution/Oplissing                                                                                                                                                                                                                                                                                                                                                                     | Explanation/Verduideliking | T&L          |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|--------------|
| 4.2.5 | <p><b>Monthly photocopying costs for different contracts</b></p>  <p>1A Starting point (0 copies ; R0,00 charge)/1A Begin punt (0 kopieë ; R0,00)<br/> 1A end point (4 000 ; 2 800)/1A eindpunt (4 000 ; 2 800)<br/> 1A connecting points with a straight line./1A kruispunte met 'n reguit lyn</p> |                            | F<br>L2<br>M |

(3)





| Ques | Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Explanation                                                                                                                                                                                                                                                                                                                        | TL           |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 4.3  | <p>Interest 1<sup>st</sup> year/<i>Rente 1<sup>ste</sup> jaar</i></p> $= \frac{6}{100} \times R1\,250\,000 \checkmark \text{MA}$ $= R75\,000 \checkmark \text{CA}$ <p>Amount at the end of year 1</p> $= R1\,250\,000 + R75\,000$ $= R1\,325\,000 \checkmark \text{CA}$ <p>Interest 2<sup>nd</sup> year:/ <i>Rente 2<sup>de</sup> jaar</i></p> $= \frac{6}{100} \times R1\,325\,000$ $= R79\,500 \checkmark \text{CA}$ <p>Amount at the end of year 2</p> $= R1\,325\,000 + R79\,500$ $= R1\,404\,500 \checkmark \text{CA}$ <p>Interest for/<i>rente vir</i> <math>\frac{1}{4}</math> a year/<i>'n jaar</i>:</p> $= \frac{6}{100} \times \frac{1}{4} \times R1\,404\,500 \checkmark \text{MA}$ $= R21\,067,50$ <p>Amount at the end of year <math>\frac{1}{4}</math></p> $= R1\,404\,500 + R21\,067,50$ $= R1\,425\,567,50 \checkmark \text{CA}$ <p>Total interest earned/<i>totale rente verdien</i></p> $= R1\,425\,567,50 - R1\,250\,000$ $= R175\,567,50 \checkmark \text{CA}$ <p><math>\therefore</math> Interest is not enough/sufficient <math>\checkmark \text{O}</math></p> | <p>1MA calculating the interest<br/>1CA 1<sup>st</sup> year interest</p> <p>1CA amount end of year 1</p> <p>1CA 2<sup>nd</sup> year interest</p> <p>1CA amount end of year 2</p> <p>1MA calculating % for quarter of a year</p> <p>1CA amount end of <math>\frac{1}{4}</math> year</p> <p>1CA total interest<br/>1O conclusion</p> | F<br>L3<br>M |





|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Total interest earned/<i>totale rente verdien</i></p> $= R\ 75\ 000 + R\ 79\ 500 + R21\ 067,50$ $= R175\ 567,50 \checkmark CA$ <p><math>\therefore</math> Interest is not enough/sufficient <math>\checkmark O</math></p> <p style="text-align: center;"><b>OR/OF</b></p> <p>Amount at the end of year 1</p> $= \frac{106}{100} \times R1\ 250\ 000 \checkmark MA$ $= R1\ 325\ 000 \checkmark CA$ <p>Amount at the end of year 2</p> $= \frac{106}{100} \times R1\ 325\ 000 \checkmark MA$ $= R1\ 404\ 500 \checkmark CA$ <p>Interest for/<i>rente vir</i> <math>\frac{1}{4}</math> a year/<i>'n jaar</i>:</p> $= \frac{6}{100} \times \frac{1}{4} \times R1\ 404\ 500 \checkmark MA$ $= R21\ 067,50$ <p>Amount at the end of year <math>\frac{1}{4}</math></p> $= R1\ 404\ 500 + R21\ 067,50$ $= R1\ 425\ 567,50 \checkmark CA$ <p>Total interest earned/<i>totale rente verdien</i></p> $= R1\ 425\ 567,50 - R1\ 250\ 000$ $= R175\ 567,50 \checkmark CA$ <p><math>\checkmark O</math></p> <p><math>\therefore</math> Interest is not enough/sufficient/ <i>Die rente is nie genoeg nie/nie voldoende nie</i></p> <p style="text-align: center;"><b>OR/OF</b></p> | <p>1CA total interest<br/>1O conclusion</p> <p>1A increased percentage<br/>1MA calculating the interest<br/>1CA amount end of year 1</p> <p>1MA calculating the interest<br/>1CA amount end of year 2</p> <p>1MA calculating % for quarter of a year</p> <p>1CA amount end of <math>\frac{1}{4}</math> year</p> <p>1CA total interest<br/>1O conclusion</p> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



| Ques | Solution                                                                                                                                                                                                                                                                                                                                                                                           | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | TL |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
|      | <p>Total amount /totale bedrag</p> <p>✓MA ✓A ✓MA ✓MA ✓A ✓MA</p> $= R1\ 250\ 000 \times 1,06 \times 1,06 \times 1,015$ $= R1\ 425\ 567,50 \checkmark \text{ CA}$ <p>Total interest earned/totale rente verdien</p> $= R1\ 425\ 567,50 - R1\ 250\ 000$ $= R175\ 567,50 \checkmark \text{ CA}$ <p>✓O</p> <p>∴ Interest is not enough/sufficient/Die rente is nie genoeg<br/>nie/nie voldoende nie</p> | <p>1A increased percentage</p> <p>1MA multiplying by R1 250 000</p> <p>1MA multiplying by 1,06</p> <p>1MA multiplying by another 1,06</p> <p>1A 0,015</p> <p>1MA multiplying by 1,015</p> <p>1CA amount end of <math>2\frac{1}{4}</math> years</p> <p>1CA total interest</p> <p>1O conclusion</p> <p style="text-align: right;">(9)</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>-If learners use the formula, it must be 100% correct for full marks.</p> <p>-If there is a mistake with the formula, allocate 0 marks</p> </div> |    |
|      |                                                                                                                                                                                                                                                                                                                                                                                                    | <b>[36]</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |    |





| QUESTION/VRAAG 5 |                                                                                                                                                                                                                                                                                                                                                                                                                                     | [24 MARKS/PUNTE]                                                                                                                                                                                                                                                                    |              |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Q/V              | Solution/Oplissing                                                                                                                                                                                                                                                                                                                                                                                                                  | Explanation/Verduideliking                                                                                                                                                                                                                                                          | T&L          |
| 5.1.1            | $\checkmark\checkmark A$<br>Descending/ <i>Dalend</i>                                                                                                                                                                                                                                                                                                                                                                               | 2A correct order<br>(2)                                                                                                                                                                                                                                                             | D<br>L1<br>E |
| 5.1.2            | $\checkmark\checkmark O$<br>Salaries of all the top five world players is in 100 000 000/100 millions/ <i>Salarisse van al die top vyf wêreldspelers is in 100 000 000/100 miljoen.</i><br><br><b>OR/OF</b><br>Salary is in hundred million digits. $\checkmark\checkmark O$                                                                                                                                                        | 2O correct explanation<br>(2)                                                                                                                                                                                                                                                       | F<br>L4<br>M |
| 5.1.3            | Cristiano Ronaldo salary/ <i>se salaris</i><br>$= 200\,000\,000 + 60\,000\,000$<br>$= 260\,000\,000\$ \checkmark MA$<br>salary in rands/ <i>salaris in rand</i><br>$= \frac{260\,000\,000}{0,05644617} \checkmark MCA$<br>$= R\,4\,606\,158\,389 \checkmark CA$<br>Top 11 DSTV players' salary/ <i>Top 11 spelers se salaris : C Ronaldo's</i><br>$= 6\,860\,000 : 4\,606\,158\,389 \checkmark MCA$<br>$= 1 : 671,45 \checkmark CA$ | 1A total salary<br><br>1MCA numerator<br>1A denominator<br>1CA simplification<br><br>1MCA ration in correct order<br>1CA simplified<br><b>NPR</b><br>(6)                                                                                                                            | F<br>L3<br>M |
| 5.1.4            | Probability/ <i>Moontlikheid</i><br>$= \frac{12}{22} \times 100\% \checkmark MA$<br>$= 54,55\% \checkmark CA$                                                                                                                                                                                                                                                                                                                       | <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <b>Accept</b><br/> <math>Probability = \frac{1}{11} \times 100\%</math><br/> <math>= 9,09\%</math><br/> <b>Full marks</b> </div> 1A numerator and denominator<br>1MA multiply by 100%<br>1CA answer<br>(3) | P<br>L3<br>M |



| Q/V   | Solution/Oplissing                                                                                                                                                                                                                                                                                | Explanation/Verduideliking                                                                                               | T&L          |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|--------------|
| 5.2.1 | $G = 3\,484\,336 - (2\,073\,501 + 43\,343 + 448\,122 + 293\,743)$ $= 3\,484\,336 - 2\,858\,709$ $= 625\,627$                                                                                                                                                                                      | 1MA adding correct values<br>1MA subtracting from total<br>1CA value of G<br><b>AO</b><br>(3)                            | F<br>L2<br>E |
| 5.2.2 | Total income /totale inkomste<br>$= 716\,603 + 2\,227\,636 + 251\,027 + 519\,604 + 312\,290$ $= 4\,027\,160$<br><b>H</b> = Total income/totale inkomste – Total expenditure/totale uitgawes<br>$= R4\,027\,160 - R3\,832\,604$ $= R194\,556$<br>It is a <b>Surplus</b> / Dit is 'n <b>surplus</b> | 1MA adding correct values<br>1A total income<br><br>1SF correct substitution<br>1CA simplification<br>1CA surplus<br>(5) | F<br>L2<br>E |
| 5.2.3 | % increase/verhoging =<br>$\frac{\text{Difference in employee costs}}{\text{Original budgeted employee costs}} \times 100\%$ $= \frac{1\,040\,938\,000 - 961\,353\,000}{961\,353\,000} \times 100\%$ $= 8,28$ $\approx 8,3\%$                                                                     | 1RT correct values<br>1A numerator<br>1A denominator<br>(3)                                                              | F<br>L2<br>E |
|       |                                                                                                                                                                                                                                                                                                   | <b>[24]</b>                                                                                                              |              |

**TOTAL/TOTAAL: 150**