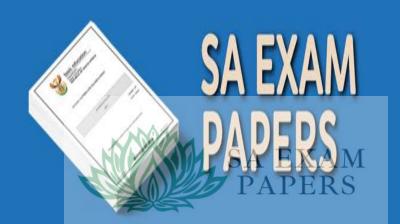


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### PROVINCIAL PREPARATORY EXAMINATION/ PROVINSIALE VOORBEREIDENDE EKSAMEN

GRADE/GRAAD 12

# **MATHEMATICAL LITERACY P1**

## **SEPTEMBER 2024**

### **MEMO**

MARKS/PUNTE: 150

| Symbol/Kode | Explanation/Verduideliking                                                                                                                                             |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MA          | Method with accuracy/Metode met akkuraatheid                                                                                                                           |
| MCA         | Method with consistent accuracy/Metode met volgehoue akkuraatheid                                                                                                      |
| CA          | Consistent accuracy/Volgehoue akkuraatheid                                                                                                                             |
| Α           | Accuracy/Akkuraatheid                                                                                                                                                  |
| С           | Conversion/Herleiding                                                                                                                                                  |
| S           | Simplification/Vereenvoudiging                                                                                                                                         |
| RT          | Reading from a table/graph/document/diagram/Lees vanaf tabel/grafiek/dokument/diagram                                                                                  |
| SF          | Correct substitution in a formula/Korrekte vervanging in 'n formule                                                                                                    |
| 0           | Opinion/Explanation/Opinie/Verduideliking                                                                                                                              |
| Р           | Penalty, e.g. for no units, incorrect rounding off, etc./Penalisering, bv. vir geen eenhede, verkeerde afronding, ens.                                                 |
| NPR         | No penalty for correct rounding/Geen penalisering vir korrekte afronding nie                                                                                           |
| NPU         | No penalty for omitting unit, but wrong unit is penalised/Geen penaliseringe indien die<br>eenheid uitgelos is nie, maar wel indien 'n verkeerde eenheid gebruik word. |
| AO          | Answer only/Slegs antwoord                                                                                                                                             |

These marking guidelines consist of 19 pages. *Hierdie 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 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 item presented.
- Rounding is an independent mark.
- · General principle of marking, if the candidate makes one mistake one mark is deducted.
- A conclusion mark can only be given if relevant calculations precedes it.
- No penalty for rounding (NPR) if the first decimal is correct.

#### 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 egter 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 item.
- Afronding tel as 'n afsonderlike punt.
- Die algemene beginsel van merk as 'n leerder een fout maak, word een punt afgetrek.
- 'n Gevolgtrekkingspunt kan slegs gegee word indien relevante berekeninge dit voorgaan.
- Geen penalisering vir ronding (NPR) as die eerste desimaal korrek is nie.

| $\mathbf{Q}/V$ | Solution/Oplossing                                                                                                                                          | Explanation/Verduideliking              | T&I     |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|---------|
| 1.1.1          | Discount/Afslag                                                                                                                                             |                                         | F<br>L1 |
|                | R429,00 - R301,00 ✓MA                                                                                                                                       | 1MA subtracting correct values          |         |
|                | = R128,00 ✓A                                                                                                                                                | 1A simplification (2)                   | 60.00   |
| 1.1.2          | = 0,3333<br>✓✓A                                                                                                                                             | 2A correct decimal<br>NPR<br>(2)        | P<br>L1 |
| 1.1.3          | $= \frac{R179,00}{12} \checkmark MA$<br>= R14,91666667 $\checkmark A$                                                                                       | 1MA dividing by 12<br>1A simplification | F<br>L1 |
|                | $=$ R14,92 $\checkmark$ R                                                                                                                                   | 1R correct rounding (3)                 |         |
| 1.1.4          | = R0/Free/Gratis $\checkmark \checkmark A$                                                                                                                  | 2A correct delivery cost (2)            | F<br>L1 |
| 1.1.5          | Number of boxes/Aantal bokse                                                                                                                                |                                         | F<br>L1 |
|                | $=\frac{27}{12}$ $\checkmark$ MA<br>= 2,25                                                                                                                  | 1MA dividing by 12                      |         |
|                | = 3 boxes/bokse $\checkmark$ A                                                                                                                              | 1A correct rounded answer (2)           |         |
| 1.2.1          | Twenty-six million fifty-six thousand seven<br>hundred and six/Ses en twintig miljoen ses<br>en vyftig duisend sewehonderd en ses $\checkmark \checkmark A$ | 2A correct number in words (2)          | D<br>L1 |
| 1.2.2          | 18 – 24 years/jaar ✓✓A                                                                                                                                      | 2A correct age group                    | D<br>L1 |
|                |                                                                                                                                                             | (2)                                     | D       |
| 1.2.3          | Total percentage/ <i>Totale persentasie</i><br>✓RT ✓MA                                                                                                      | 1RT correct values                      | L1      |
|                | $= 3,8\% + 3,6\% + 2,2\% + 1,6\% + 3,0\% + 2,6\% \checkmark A$<br>= 16,8%                                                                                   | 1MA adding values<br>1A simplification  |         |
|                | 10,070                                                                                                                                                      | (3)                                     |         |

| Q/V            | Solution/Oplossing                        | Explanation/Verduideliking     | T&L     |
|----------------|-------------------------------------------|--------------------------------|---------|
|                |                                           |                                | D       |
| 1.2.4          | Percentage difference/Persentasie verskil |                                | L1      |
|                | $= 14,4\% - 1,6\% \checkmark MA$          | 1MA subtracting correct values |         |
|                | $= 12.8\% \checkmark A$                   | 1A simplification              |         |
|                |                                           |                                |         |
|                |                                           | (2)                            | P       |
| 1.3.1          | 71,25 million rand $\checkmark$ RT        | 1RT correct value from table   | F<br>L1 |
| 1.9.1          | 11,25 million rand V KI                   |                                | LI      |
|                | = R71 250 000 ✓A                          | 1A in numerals                 |         |
|                |                                           |                                |         |
|                |                                           | (2)                            | F       |
| 1.3.2          | Value of A/Waarde van A                   |                                | L1      |
| *              |                                           |                                |         |
|                | $=\frac{35.5}{100} \times 54$ VMA         | 1MA calculating 35,5% of 54    |         |
|                |                                           | 1.4.1.1.0.0                    |         |
|                | = 19.17 <b>A</b>                          | 1A simplification              |         |
|                |                                           | (2)                            |         |
| PDF 104031 803 | ✓RT                                       | 1RT correct values             | F       |
| 1.3.3          | 90:150 ✓ MA                               | 1MA correct order              | L1      |
|                | 3:5 ✓CA                                   | 1CA simplification             |         |
|                | 5.5 · CA                                  | TCA simplification             |         |
|                | OR/OF                                     |                                |         |
|                | ✓RT                                       | 107                            |         |
|                | 90 000 000 : 150 000 000 ✓MA              | 1RT correct values             |         |
|                | 90 000 000 : 150 000 000 • MA             | 1MA correct order              |         |
|                | 3:5 ✓CA                                   | 1CA simplification             |         |
|                |                                           |                                |         |
|                |                                           | (3)                            | 312     |
| 1.3.4          | 4 <b>√∕</b> RT                            | 1RT correct number of suburbs  | F<br>L1 |
| 1.5.4          |                                           |                                | LI      |
|                |                                           | (2)                            |         |
|                |                                           | [29]                           |         |

|            | TION/VRAAG 2 [33 MARKS/PUNTE]                                                                                                                                             | T 1 / / / / / / / / / / / / / / / / / /                                                                                                 | TAT     |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|---------|
| Q/V        | Solution/Oplossing                                                                                                                                                        | Explanation/Verduideliking                                                                                                              | T&L     |
| 2.1.1      | 6 people/ <i>mense</i> ✓✓A                                                                                                                                                | 2A correct number (2)                                                                                                                   | F<br>L1 |
| 2.1.2      | Percentage increase = $\frac{\sqrt[4]{MA}}{\frac{R250-R230}{R230}} \times \frac{\sqrt[4]{MA}}{100\%}$ $= 8,695652174\%$ $= 9\% \checkmark CA$                             | 1MA subtracting correct<br>values<br>1A denominator<br>1MA calculating percentage<br>1CA simplification with<br>correct rounding<br>(4) |         |
| 2.1.3<br>* | Return cost for senior citizens/ <i>Retoerkoste vir</i><br>senior burgers<br>= $(\frac{1}{4} \times R420)$ $\checkmark$ MA<br>= R105 $\checkmark$ A                       | 1MA calcatute ¼ of R420<br>1A return cost senior<br>citizen                                                                             | F<br>L3 |
|            | Total cost after 13:00 / Totale koste na 13:00<br>$\checkmark$ MA $\checkmark$ MA<br>= (2 × R360) + (3 × R130) + R105<br>= R720 + R390 + R105 $\checkmark$ MCA            | 1MA calculate afternoon<br>adult return cost<br>1MA calculate one-way<br>children afternoon                                             |         |
|            | $= R1 215  \checkmark CA$ $= R1 365 - R1 215  \checkmark MCA$ $= R1365 - R1 215  \checkmark MCA$ $= R150  \checkmark CA$                                                  | MCA adding all cost<br>1CA total cost after 13:00<br>1MCA calculate the<br>difference<br>1CA amount saved                               |         |
|            |                                                                                                                                                                           | (8)                                                                                                                                     |         |
| 2.1.4      | They do not earn an income/Hulle verdien nie<br>'n inkomste nie. $\checkmark \checkmark \circ$ O                                                                          | 20 valid reason                                                                                                                         | F<br>L4 |
|            | OR/OF                                                                                                                                                                     |                                                                                                                                         |         |
|            | Students received student discount/ <i>Studente ontvang student afslag.</i> ✓✓O                                                                                           | 20 valid reason                                                                                                                         |         |
|            | OR/OF                                                                                                                                                                     |                                                                                                                                         |         |
|            | Students are more likely to support businesses that offer discount/ <i>Studente is meer geneig om besighede te ondersteun wat afslag bied</i> . $\checkmark \checkmark O$ | 20 valid reason (2)                                                                                                                     |         |



| Q/V   | Solution/Oplossing                                                                                                                                                                                                                                      | Explanation/Verduideliking                                                                                                                                            | T&L     |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| 2.2.1 | ✓✓A<br>You buy the solar panels at a monthly<br>installment. Only after your final installment<br>you own the solar panels./<br>Jy koop die sonpanele teen 'n maandelikse<br>paaiement. Eers ná jou finale paaiement<br>word die sonpanele jou eiendom. | 2A explanation (2)                                                                                                                                                    | F<br>L1 |
| 2.2.2 | Amount excluding VAT/Bedrag BTW uitgesluit                                                                                                                                                                                                              |                                                                                                                                                                       | F<br>L2 |
|       | $= \frac{R224\ 660}{1,15}  \checkmark MA$<br>= R195 356,52                                                                                                                                                                                              | 1MA dividing by 1,15                                                                                                                                                  |         |
|       | Vat Amount/ <i>BTW bedrag</i><br>= R224 660 - R195 356,52 ✓MCA<br>= R29 303,48 ✓CA                                                                                                                                                                      | 1MCA subtracting values<br>1CA simplification                                                                                                                         |         |
|       | OR/OF                                                                                                                                                                                                                                                   |                                                                                                                                                                       |         |
|       | $= \frac{R224660}{115} \times 15  \checkmark MCA$<br>= R29303,48 $\checkmark CA$                                                                                                                                                                        | 1MA dividing by 115<br>1MCA multiply by 15<br>1CA simplification                                                                                                      |         |
|       |                                                                                                                                                                                                                                                         | (3)                                                                                                                                                                   |         |
| 2.2.3 | Total cost/ <i>Totale koste</i><br>$\checkmark MA \qquad \checkmark MA$<br>= R26 960 + (R5 400 × 60) + (R105 × 60)<br>$\checkmark CA \qquad \checkmark CA$<br>= R26 960 + R324 000 + R6 300 $\checkmark$ MCA                                            | 1MA calculating total<br>instalment<br>1MA calculating total admin<br>fees<br>1CA simplification instalment<br>1CA simplification admin fee<br>1MCA adding all values | F<br>L2 |
| 2     | = R357 260 ✓CA                                                                                                                                                                                                                                          | 1CA simplification (6)                                                                                                                                                |         |

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| Q/V   | Solution/Oplossing                                                                                         | Explanation/Verduideliking                 | T&L     |
|-------|------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------|
| 2.2.4 | Division of monthly installment/<br>Verdeling van maandelikse paaiement                                    |                                            | F<br>L4 |
|       | $5+3=8 \checkmark A$                                                                                       | 1A correct total                           |         |
|       | Mr Johnson = $\frac{5}{8} \times R5400$ $\checkmark MA$                                                    | 1MA calculating portion                    |         |
|       | = R3 375 ✓CA                                                                                               | 1CA simplification                         |         |
|       | Mrs Johnson = $\frac{3}{8} \times R5400$<br>= R2 025 $\checkmark$ MCA                                      | 1MCA correct portion                       |         |
|       | Difference/Verskil                                                                                         |                                            |         |
|       | $= R3 375 - R2 025 = R1 350 \checkmark MCA$                                                                | 1MCA difference                            |         |
|       | $\checkmark O$ His claim is VALID/Sy bewering is GELDIG                                                    | 10 conclusion                              |         |
|       | OR/OF                                                                                                      |                                            |         |
|       | Division of monthly installment/<br>Verdeling van maandelikse paaiement                                    |                                            |         |
|       | $5+3=8$ $\checkmark$ A                                                                                     | 1A correct total                           |         |
|       | $\begin{vmatrix} \frac{5}{8} - \frac{3}{8} & \checkmark MA \\ = \frac{2}{8} & \checkmark CA \end{vmatrix}$ | 1MA subtracting the two fractions          |         |
|       | $=\frac{2}{8}$ $\checkmark$ CA                                                                             | 1CA simplification                         |         |
|       | Difference/Verskil                                                                                         |                                            |         |
|       | $=\frac{2}{8} \times R5400  \checkmark MCA$                                                                | 1MCA multiply by R5 400<br>1MCA difference |         |
|       | = R1 350 $\checkmark$ MCA $\checkmark$ O<br>His claim is VALID/Sy howering is CELDIC                       | 10 conclusion                              |         |
|       | His claim is VALID/Sy bewering is GELDIG                                                                   |                                            | 3       |
|       |                                                                                                            | ((                                         |         |

| QUES           | TION/VRAAG 3 [25 MARKS/PUNTE]                                                          |                                                                                        |         |
|----------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|---------|
| $\mathbf{Q}/V$ | Solution/Oplossing                                                                     | Explanation/Verduideliking                                                             | T&L     |
| 3.1.1          | $\checkmark$ MA<br>A = 21 100 - (2 522 + 5 857 + 4 934 + 6 563)<br>A = 21 100 - 19 876 | 1MA adding correct values<br>and deduct from total                                     | D<br>L1 |
|                | A = 1 224 ✓A                                                                           | 1A simplification                                                                      |         |
|                |                                                                                        | (2)                                                                                    |         |
| 3.1.2          | Orange River/Oranje Rivier ✓RT                                                         | 1RT region                                                                             | D<br>L1 |
|                | Berg River/Berg Rivier ✓RT                                                             | 1RT region (2)                                                                         |         |
| 3.1.3          | Compound Bar Graph/Saamgestelde ✓✓A<br>staafgrafiek                                    | 2A graph                                                                               | D<br>L1 |
|                | OR/ <i>OF</i><br>Line Graph/ <i>Lyngrafiek</i> ✓✓ A                                    | 2A graph                                                                               |         |
|                | OR/ <i>OF</i><br>✓✓A<br>Multiple Bar Graph/ <i>Meervoudige staafgrafiek</i>            | 2A graph (2)                                                                           |         |
| 3.1.4<br>*     | Median/Mediaan                                                                         |                                                                                        | D<br>L2 |
|                | 5 626; 5 768; 5 778; 5 857; 6 147; 6 195 ✓ A<br>✓ A<br>$=\frac{5778+5857}{\sqrt{MA}}$  | <ul><li>1A arranging all the correct values</li><li>1A finding middle values</li></ul> |         |
|                | $=\frac{\frac{2}{11635}}{2}$                                                           | 1MA concept of median                                                                  |         |
|                | = 5 817,5 ✓CA                                                                          | 1CA simplification                                                                     |         |
|                |                                                                                        | (4)                                                                                    |         |

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| s vanaf 2018<br>✓O<br><u>increase</u> in<br><u>toename</u> in<br><u>ecreased</u> /<br>uksie jaarliks | 10 increase from 2018 to 2019         10 decrease from 2019 to 2023         (2)         1 RT correct values 1MA adding correct values         1 RT correct values 1MA adding correct values         (2) | D<br>L4<br>D<br>L2<br>D |
|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| <u>toename</u> in<br>ecreased∕<br>uksie jaarliks<br>∕MA                                              | 10 decrease from 2019 to<br>2023<br>(2)<br>1 RT correct values<br>1MA adding correct values<br>1 RT correct values<br>1 MA adding correct values                                                        | L2<br>D                 |
| ecreased/<br>uksie jaarliks<br>⁄MA                                                                   | 2023<br>(2)<br>1 RT correct values<br>1MA adding correct values<br>1 RT correct values<br>1 MA adding correct values                                                                                    | L2<br>D                 |
| uksie jaarliks<br>⁄MA                                                                                | 1 RT correct values<br>1MA adding correct values<br>1 RT correct values<br>1MA adding correct values                                                                                                    | L2<br>D                 |
| 29/06/02/204                                                                                         | 1MA adding correct values<br>1 RT correct values<br>1MA adding correct values                                                                                                                           | L2<br>D                 |
| 29/06/02/204                                                                                         | 1MA adding correct values                                                                                                                                                                               |                         |
|                                                                                                      | (2)                                                                                                                                                                                                     |                         |
| ×                                                                                                    |                                                                                                                                                                                                         |                         |
|                                                                                                      | 2RT region (2)                                                                                                                                                                                          | L1                      |
| ✓MA<br>5 498 +                                                                                       | 1 MA concept of mean<br>1MA adding values                                                                                                                                                               | D<br>L3                 |
|                                                                                                      | 1MCA changing the subject<br>of the formula<br>1CA simplification                                                                                                                                       |                         |
|                                                                                                      |                                                                                                                                                                                                         |                         |
| ✓MA<br>+ Z + 22 627                                                                                  | 1 MA concept of mean                                                                                                                                                                                    |                         |
| - 2 + 22 027                                                                                         | 1MA adding values                                                                                                                                                                                       |                         |
|                                                                                                      | 1MCA changing the subject                                                                                                                                                                               |                         |
|                                                                                                      | A                                                                                                                                                                                                       |                         |

| Q/V   | Solution/Oplossing                             | Explanation/Verduideliking | T&L |
|-------|------------------------------------------------|----------------------------|-----|
| -     |                                                |                            | Р   |
| 3.2.4 | Probability/Waarskynlikheid                    |                            | L3  |
| *     | ✓RT ✓MA                                        | 1RT correct values         |     |
|       | ✓RT<br>24472+13600 ✓MA                         | 1MA adding correct values  |     |
|       | $=\frac{86870}{4}$                             |                            |     |
|       | _ 38072                                        | 1A denominator             |     |
|       | $=\frac{1}{86870}$                             |                            |     |
|       | 0.4382(40728 √CA                               |                            |     |
|       | = 0,4382640/28                                 | 1CA simplification         |     |
|       | $=0,44$ $\checkmark$ R                         | 1R rounding to 2 decimals  |     |
|       | OR/OF                                          |                            |     |
|       | ✓RT                                            | 1RT correct values         |     |
|       | $=\frac{24472}{13600}$                         |                            |     |
|       | $=\frac{1}{86870}+\frac{1}{86870}$             | 1A denominator             |     |
|       |                                                |                            |     |
|       | $= 0,2817082998 + 0,156555773$ $\checkmark$ MA | 1MA adding decimals        |     |
|       | 0 1292(10729 √CA                               | 1CA simplification         |     |
|       | =0,4382640/28                                  | 1R rounding to 2 decimals  |     |
|       | $=0,44$ $\checkmark$ R                         | (5)                        |     |
|       |                                                | [25]                       |     |

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| -        | TION/VRAAG 4 [32 MARKS/PUNTE]                                                                                                                                                                                                                                                                          | Fundamention /1/                                                  | TOF     |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|---------|
| Q/V      | Solution/Oplossing                                                                                                                                                                                                                                                                                     | Explanation/Verduideliking                                        | T&L     |
| 4.1.1    | Fixed Cost/Vaste Koste<br>= R180 + R250 ✓MA<br>=R430 ✓A                                                                                                                                                                                                                                                | 1MA adding correct values<br>1A simplification<br>(2)             | F<br>L1 |
| 4.1.2    | Unit cost of patties/ <i>Eenheidskoste van patties</i><br>= R417 $\div$ 60 $\checkmark$ MA<br>= R6,95 $\checkmark$ A<br>Unit cost of butter/ <i>Eenheidskoste van botter</i><br>= R48 $\div$ 80<br>= R0,60 $\checkmark$ A<br>Unit cost of cheese/ <i>Eenheidskoste van kaas</i><br>= R125 84 $\div$ 49 | 1MA dividing by 60<br>1A patties unit cost<br>1A butter unit cost | F<br>L3 |
|          | $= R135,84 \div 48 \\= R2,83 \checkmark A$                                                                                                                                                                                                                                                             | 1A cheese unit cost                                               |         |
|          | Unit cost of bread roll/ <i>Eenheidskoste van</i><br>broodrolletjie ✓MCA<br>R14 – R6,95 – R0,60 – R2,83<br>= R3,62                                                                                                                                                                                     | 1MCA subtracting the unit<br>costs from R14                       |         |
|          | Unit price of bread roll at different stores<br>/ <i>Eenheidskoste van broodrolletjie by</i><br><i>verskikllende winkels</i><br>Econo Foods                                                                                                                                                            |                                                                   |         |
|          | = R185,40 $\div$ 60<br>= R3,09<br>Makro<br>= R72,89 $\div$ 18<br>= R4,05                                                                                                                                                                                                                               |                                                                   |         |
|          | Food and More<br>= $R86,88 \div 24$<br>= $R3,62$ $\checkmark$ MCA                                                                                                                                                                                                                                      | 1MCA Calculating the unit cost                                    |         |
|          | FOOD AND MORE ✓A                                                                                                                                                                                                                                                                                       | 1A correct store                                                  |         |
|          | OR/OF                                                                                                                                                                                                                                                                                                  |                                                                   |         |
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| Unit cost of patties/ <i>Eenheidskoste van patties</i><br>= $R417 \div 60 \checkmark MA$<br>= $R6,95 \checkmark A$ | 1MA dividing by 60<br>1A patties unit cost  |
|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| Unit cost of butter/ <i>Eenheidskoste van botter</i><br>= R48 ÷ 80<br>= R0,60 ✓A                                   | 1A butter unit cost                         |
| Unit cost of cheese/ <i>Eenheidskoste van kaas</i><br>= R135,84 ÷ 48<br>= R2,83 ✓A                                 | 1A cheese unit cost                         |
| Unit cost of bread roll/ <i>Eenheidskoste van</i><br>broodrolletjie ✓MCA<br>R14 – R6,95 – R0,60 – R2,83<br>= R3,62 | 1MCA subtracting the unit<br>costs from R14 |
| Bulk price bread rolls/ <i>Grootmaat prys</i><br>broodrolletjies ✓MCA<br>= R3,62 × 24<br>= R86,88                  | 1MCA multiply by the units per pack         |
| FOOD AND MORE $\checkmark A$                                                                                       | 1A correct store (7)                        |

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| 4.1.3 | Profit/Wins<br>R25 - R14 $\checkmark$ MA<br>= R11 $\checkmark$ A<br>= $\frac{11}{14} \times 100\%$ $\checkmark$ MCA                        | 1MA subtracting correct<br>values<br>1A simplification<br>1MCA percentage<br>calculation | F<br>L4 |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------|
|       | = 78,57% $\checkmark$ CA<br>Rudi's claim is invalid/ <i>Rudi se bewering is</i> $\checkmark$ O<br><i>verkeerd</i><br><b>OR</b> / <i>OF</i> | 1CA simplification<br>1O conclusion<br>NPR                                               |         |
|       | Profit/Wins<br>= $R14 \times \frac{80}{100}$ $\checkmark MA$<br>= $R11,20$ $\checkmark A$                                                  | 1MA percentage calculation<br>1A simplification                                          |         |
|       | Selling price /Verkoopsprys<br>=R14 + R11,20 ✓MCA<br>= R25,20 ✓CA                                                                          | 1MCA adding correct values<br>1CA simplification                                         |         |
|       | R25,20 > R25<br>Rudi's claim is invalid/ <i>Rudi se bewering is</i><br><i>verkeerd</i> ✓O                                                  | 10 conclusion (5)                                                                        |         |

| $\mathbf{Q}/V$ | Solution/Oplossing                                                                                                                              | Explanation/Verduideliking                                                                             | T&L     |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------|
| 4.2.1          | Tennis √√RT                                                                                                                                     | 2RT sport event (2)                                                                                    | D<br>L1 |
| 4.2.2          | Median age/Mediaan ouderdom                                                                                                                     |                                                                                                        | D<br>L2 |
|                | Difference/Verskil<br>$\checkmark RT \checkmark RT$<br>$= 29 - 22 \checkmark MA$<br>$= 7 \checkmark CA$                                         | 1RT median age rugby<br>1RT median age swimming<br>1MA subtracting values<br>1CA simplification<br>(4) |         |
| 4.2.3          | Inter Quartile Range/Interkwartielomvang                                                                                                        |                                                                                                        | D<br>L3 |
|                | $= Q3 - Q1$ $\checkmark RT \checkmark RT$ $= 36 - 17 \checkmark MA$                                                                             | 1RT quartile 3<br>1RT quartile 1<br>1MA subtracting values                                             |         |
|                | $= 19 \qquad \checkmark CA$                                                                                                                     | 1CA simplification (4)                                                                                 |         |
| 4.2.4          | $\begin{vmatrix} \checkmark MA \\ \frac{25}{100} \times \frac{84}{1} & \checkmark RT \\ = 21 & \checkmark A \end{vmatrix}$                      | 1MA calculating 25%<br>1RT finding 84<br>1A simplification                                             | D<br>L3 |
|                | OR/OF                                                                                                                                           |                                                                                                        |         |
|                | $\frac{75}{100} \times 84  \checkmark RT$                                                                                                       | 1RT finding 84                                                                                         |         |
|                | $= 63$ $84 - 63 \checkmark MA$ $= 21 \checkmark A$                                                                                              | 1MA subtracting correct<br>values<br>1A simplification<br>(3)                                          |         |
| 4.3.1          | 25 May/ <i>25 Mei</i> ✓✓RT                                                                                                                      | 2RT date (2)                                                                                           | F<br>L1 |
| 4.3.2          | Salary B/Salaris B<br>$\checkmark$ RT<br>= R5 206,91 - (-R38 304,43)<br>= R5 206,91 + R38 304,43 $\checkmark$ MA<br>= R43 511,34 $\checkmark$ A | 1RT correct values<br>1MA adding values<br>1A simplification<br>(3)                                    | F<br>L2 |
|                |                                                                                                                                                 | [32]                                                                                                   |         |

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| -     | QUESTION/VRAAG 5 [31 MARKS/PUNTE]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                  |         |  |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--|
| Q/V   | Solution/Oplossing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Explanation/Verduideliking                                                                                                                                                                                                                                                                       | T&L     |  |
| 5.1.1 | SARS/ <i>SAID</i> ✓✓A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 2A government department                                                                                                                                                                                                                                                                         | F<br>L1 |  |
|       | OR/OF<br>South African Revenue Service/<br>Suid-Afrikaanse Inkomstediens ✓✓A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2A government department (2)                                                                                                                                                                                                                                                                     |         |  |
| 5.1.2 | $A = 857\ 901  \checkmark \checkmark A$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2A value of A (2)                                                                                                                                                                                                                                                                                | F<br>L2 |  |
| 5.1.3 | Medical tax credits/Mediese belasting krediete<br>$\checkmark MA \qquad \checkmark MA$<br>(R364 × 2) + (R246 × 2)<br>= R728 + R492<br>= R1 220 × 12 $\checkmark MCA$<br>= R14 640 $\checkmark CA$                                                                                                                                                                                                                                                                                                                                                                                          | <ul> <li>1MA main member and first<br/>dependant</li> <li>1MA two additional<br/>dependants</li> <li>1MCA multiply by 12</li> <li>1CA simplification</li> <li>(4)</li> </ul>                                                                                                                     | F<br>L2 |  |
| 5.1.4 | Monthly tax/Maandelikse belasting<br>= R77 362 + $\frac{31}{100}$ × (R455400-R370500)<br>= R77 362 + $\frac{31}{100}$ × (R84900)<br>= R77 362 + R26319<br>$\checkmark$ MA $\checkmark$ MCA<br>= R103 681 - R17 235 - R14 640<br>= R71 806 ÷ 12<br>= R5 983,83 $\checkmark$ MCA<br><sup>1</sup> / <sub>6</sub> of monthly taxable income/<br><sup>1</sup> / <sub>6</sub> van maandelikse belasbare inkomste<br>= R455 400 ÷ 12 $\checkmark$ MA<br>= R37 950× $\frac{1}{6}$<br>= R6 325 $\checkmark$ MCA<br><sup>1</sup> / <sub>6</sub> His claim is not valid/Sy bewering is nie geldig nie | CA From Question 5.1.3<br>1SF substitution in correct<br>bracket<br>1CA simplification<br>1MA subtracting rebate<br>1MCA subtracting medical<br>credits<br>1MCA dividing by 12 and<br>simplification<br>1MA dividing by 12<br>1MCA multiply by 1/4 and<br>simplification<br>1O conclusion<br>(8) | F<br>L4 |  |

| 5.2.1      |                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                 |          |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| *          | No mode/ <i>Geen modus</i> <b>OR</b> / <i>OF</i> None/ <i>Geen</i> ✓ ✓ A                                                                                                                                                                                                                                      | 2A no mode (2)                                                                                                                                                                                  | D<br>L2  |
| 5.2.2<br>* | Range/ <i>Omvang</i><br>✓RT ✓RT<br>12,5 °C – (-21,8 °C)<br>= 34,3 °C ✓CA                                                                                                                                                                                                                                      | 1RT correct value<br>1RT correct value<br>1CA simplification<br>NPU<br>(3)                                                                                                                      | D<br>L2  |
| 5.3.1      | Euro ✓✓RT                                                                                                                                                                                                                                                                                                     | 2RT currency (2)                                                                                                                                                                                | F<br>L1  |
| 5.3.2      | $Z = \frac{1}{7.93508628}  \checkmark MA$<br>Z = 0,1260225743 $\checkmark A$                                                                                                                                                                                                                                  | 1MA dividing by exchange<br>rate<br>1A simplification<br>(minimum of 6 decimals)<br>(2)                                                                                                         | F<br>L2  |
| 5.3.3      | Total accommodation cost/ <i>Totale akkomodasie</i><br>koste<br>$\checkmark$ RT<br>= CAD 85,45 × 4 × 6 $\checkmark$ MA<br>= CAD 2 050,80 $\checkmark$ CA<br>= $\frac{CAD 2050,80}{1}$ × 13,980936 $\checkmark$ MCA<br>= R28 672,10 $\checkmark$ CA<br>His claim is not valid/Sy bewering is nie geldig<br>nie | <ul> <li>1RT CAD 85,45</li> <li>1MA multiply by 4 and 6</li> <li>1CA simplification</li> <li>1MCA multiply with<br/>exchange rate</li> <li>1CA simplification</li> <li>10 conclusion</li> </ul> | F<br>L4  |
|            | OR/OF                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                 |          |
|            | Total accommodation cost/Totale akkomodasie<br>koste<br>= CAD 85,45 × 4 × 6 $\checkmark$ MA<br>= CAD 2 050,80 $\checkmark$ CA<br>= $\frac{CAD 2050,80}{0,071526}$ × 1 $\checkmark$ MCA<br>= R28 672,09 $\checkmark$ CA<br>His claim is not valid/Sy bewering is nie geldig<br>nie $\checkmark$ O              | <ul> <li>1RT CAD 85,45</li> <li>1MA multiply by 4 and 6</li> <li>1CA simplification</li> <li>1MCA dividing by exchange rate</li> <li>1CA simplification</li> <li>10 conclusion</li> </ul>       |          |
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| Total accommodation cost/ <i>Totale akkomodasie</i><br><i>koste</i><br>$\checkmark$ RT<br>= CAD 85,45 × 4 × 6 $\checkmark$ MA<br>= CAD 2 050,80 $\checkmark$ CA<br>$\frac{ZAR 28000}{13,980936}$ $\checkmark$ MCA<br>= CAD 2002,73 $\checkmark$ CA<br>His claim is not valid/ <i>Sy bewering is nie geldig</i><br>$\checkmark$ O<br>OR/OF | <ul> <li>1RT CAD 85,45</li> <li>1MA multiply by 4 and 6</li> <li>1CA simplification</li> <li>1MCA dividing by exchange rate</li> <li>1CA simplification</li> <li>1O conclusion</li> </ul> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Total accommodation cost/ <i>Totale akkomodasie</i><br>$\sqrt{RT}$<br>= CAD 85,45 × 4 × 6 $\sqrt{MA}$<br>= CAD 2 050,80 $\sqrt{CA}$<br>ZAR 28 000 × 0,071526 $\sqrt{MCA}$<br>= CAD 2002,73 $\sqrt{CA}$<br>His claim is not valid/ <i>Sy bewering is nie geldig</i><br>$\sqrt{O}$                                                          | 1RT CAD 85,45<br>1MA multiply by 4 and 6<br>1CA simplification<br>1MCA multiply with<br>exchange rate<br>1CA simplification<br>10 conclusion                                              |
|                                                                                                                                                                                                                                                                                                                                           | (6)                                                                                                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                           | TOTAL/TOTAAL: 150                                                                                                                                                                         |

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| NOTES |                                                                                                                                                                                                                                                                                  |             |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| QUEST |                                                                                                                                                                                                                                                                                  |             |
| 1.3.2 | $=\frac{35,5}{100}\times54$ $\checkmark$ MA<br>19 170 000                                                                                                                                                                                                                        | 1 / 2 marks |
| QUEST | TION 2                                                                                                                                                                                                                                                                           |             |
| 2.1.3 | Return cost for senior citizens/ <i>Retoerkoste vir senior burgers</i><br>= $(\frac{1}{4} \times R420)$ $\checkmark MA$<br>= R105 $\checkmark A$<br>Total cost after 13:00 / <i>Totale koste na 13:00</i>                                                                        | 8 / 8 marks |
|       | $\checkmark MA \qquad \checkmark MA$<br>= $(2 \times R360) + (3 \times R130) + R105$<br>= $R720 + R390 + R105 \checkmark MCA$<br>= $R1 215 \qquad \checkmark CA$<br>Amount saved/ <i>Besparing</i><br>= $R1 335 - R1 215 \qquad \checkmark MCA$<br>= $R120 \qquad \checkmark CA$ |             |
| QUEST | · CA                                                                                                                                                                                                                                                                             | 6           |
| 3.1.4 | Correct dataset used and one value omitted                                                                                                                                                                                                                                       | 2 / 4 marks |
|       | Wrong dataset used                                                                                                                                                                                                                                                               | 3 / 4 marks |
| 3.1.5 | Decreased                                                                                                                                                                                                                                                                        | 1 / 2 marks |
|       | Decreased from 2019 to 2023                                                                                                                                                                                                                                                      | 2 / 2 marks |
| 3.2.4 | Probability/Waarskynlikheid<br>$=\frac{24472+13600}{86870 \checkmark A} \checkmark MA$ $=\frac{38072}{86870}$ $\checkmark CA$ $= 0,4382640728 \times 100$ $= 43,82640728 \%$ $= 43,83 \% \checkmark R$                                                                           | 5 / 5 marks |

| 4.2.3 | Other sport                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2 / 4 marks |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| QUEST | ION 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |
| 5.1.4 | Monthly tax/Maandelikse belasting<br>= R77 362 + $\frac{31}{100} \times (R455400 - R370500)$<br>= R77 362 + $\frac{31}{100} \times (R84900)$<br>= R77 362 + R26319<br>$\checkmark MA \checkmark MCA$<br>= R103 681 - R17 235 - R14 640<br>= R71 806 ÷ 12<br>= R5 983,83 $\checkmark MCA$<br>Monthly taxable income/<br>Maandelikse belasbare inkomste<br>= R455 400 ÷ 12 $\checkmark MA$<br>=R37 950<br>$\frac{R5 983.83}{R37950} \checkmark MCA$<br>= 0,15768<br>$\frac{1}{6}$<br>= 0,16667<br>$\checkmark O$<br>His claim is not valid/Sy bewering is nie geldig nie | 8 / 8 marks |
| 5.2.1 | 0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0 / 2 marks |
| 5.2.2 | -21,5 - 12,5<br>= -34,3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2 / 3 marks |