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# JUNE EXAM

# GRADE 11

## MATHEMATICAL LITERACY P1/
## *WISKUNDIGE GELETTERDHEID V1*

# JUNE 2024

## MARKING GUIDELINES/*NASIENRIGLYNE*

**MARKS/*PUNTE*: 75**

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

**These marking guidelines consist of 7 pages.**
***Hierdie nasienriglyne bestaan uit 7 blads***

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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.
- 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 and 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, merk slegs die EERSTE poging.*
- *As 'n kandidaat 'n antwoord van 'n vraag doodtrek (kanselleer) en nie oordoen nie, merk die doodgetrekte (gekanselleerde) poging.*
- *Volgehoue akkuraatheid (CA) word in ALLE aspekte van die nasienriglyne toegepas, dit hou op by die tweede berekeningsfout.*
- *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 en ekstra antwoorde gee, penaliseer vir elke ekstra item.*
- *'n Algemene merkbeginsel is dat indien 'n kandidaat een fout maak en daarna voortgaan met korrekte wiskunde, dat die kandidaat slegs een punt verloor.*

| **QUESTION/*VRAAG* 1 [14 MARKS/*PUNTE*]** | | | |
|---|---|---|---|
| **Q/*V*** | **Solution/*Oplossing*** | **Explanation/*Verduideliking*** | **T/L** |
| 1.1.1 | C ✓✓A | 2A answer (2) | F L1 E |
| 1.1.2 | D ✓✓A | 2A answer (2) | F L1 E |
| 1.1.3 | F ✓✓A | 2A answer (2) | F L1 E |
| 1.1.4 | B ✓✓A | 2A answer (2) | P L1 E |
| 1.2.1 | ✓RT ✓A<br>122,2 ; 90,1 ; 42,7 ; 10,1 ; – 6,7 ; – 1,1 ; – 17,4. | 1RT All correct values<br>1A descending order. (2) | D L1 M |
| 1.2.2 | ✓✓A<br>Tracksuit top. | 2A answer (2) | D L1 M |
| 1.2.3 | ✓MA<br>Difference / *Verskil* = R171,00 – R89,95<br>= R81,05 ✓A | 1MA subtracting correct values.<br>1A difference. (2) | F L1 E |
| | | **[14]** | |

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| QUESTION/*VRAAG* 2 [26] MARKS/*PUNTE*] | | | |
|---|---|---|---|
| **Q/*V*** | **Solution/*Oplossing*** | **Explanation/*Verduideliking*** | **T/L** |
| 2.1.1 | ✓✓A<br>A list of Mr Venter's expected income and expenses for his trip to South Africa. | 2A Correct definition<br>(2) | F<br>L1 |
| 2.1.2 | ✓MA<br>Car hire: € 23,52 × 12 = €282,24.<br>✓MA<br>Accommodation: € 31,69 × 11 = €348,59.<br>✓MCA<br>Meals: € 22,39 × 12 = €268,68.<br><br>**Adding total costs:**<br>✓MCA<br>= €1 003 + €282,24 + €348,59 + €268,68 + €500<br><br>= €2 402,51 ✓CA | 1MA Multiplying Car hire with 12 days<br>1MA Multiplying. accommodation with 11<br>1MCA Multiplying Meals with 12<br><br>1MCA Adding amounts.<br><br>1CA Answer<br>(5) | F<br>L2<br><br>L3 |
| 2.1.3 | **Exchange from Euro to Rands:**<br>✓MCA ✓CA<br>€2 402,51 × 20,10 = R48 290,45 | **CA from 2.1.2**<br>1MCA Multiplying with correct exchange rate<br>1CA Answer<br>(2) | F<br>L2 |
| 2.1.4 | **DO NOT MARKK 2.1.4**<br>**(mark out of 20 and scale up back to 26 according to formula at the end)**<br>Calculating compound interest:<br>✓MA<br>Year 1: €2 200 × × $\frac{6}{100}$<br>✓A<br>= €132 + € 2 200<br>= €2 332 ✓A<br>Year 2: €2 332 × $\frac{6}{100}$ ✓MCA<br>= €139,92 + €2 332<br>= €2 471,92 ✓CA<br>Yes Mr Venter will have enough money ✓O<br>**OR**<br>✓MA<br>Year 1: €2 200 × $\frac{106}{100}$ ✓A<br><br>= €2 332 ✓A<br>✓MCA<br>Year 2: €2 332 × $\frac{106}{100}$<br>= €2 471,92 ✓CA<br>✓O<br>Yes Mr Venter will have enough money that is more than €2 402,51 | 1MA Calculating interest<br>1A Interest of year 1<br>1A Amount end of year 1<br><br>1MCA Calculating interest<br>1CA Amount end of year 2<br><br>1O Conclusion (CA from 2.1.2)<br><br>1A Calculating $\frac{106}{100}$<br>1MA Calculating interest<br>1A Amount end of year 1<br><br>1MCA Calculating interest.<br><br>1CA Amount end of year 2<br><br>1O Conclusion (CA from 2.1.2)<br>(6) | F<br>L4 |

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| Q/*V* | Solution/*Oplossing* | Explanation/*Verduideliking* | T/L |
|---|---|---|---|
| 2.2.1 | Value Added Tax ✓✓A | 2A Writing in full (2) | F L1 |
| 2.2.2 | ✓MA<br>Block 2s Maximum kWh = 400 – 100<br>= 300kWh ✓A | 1MA Subtracting correct values.<br>1A Correct answer (2) | F L1 |
| 2.2.3 | 100 kWh × R2,0970 = R209,70 ✓A<br>300 kWh × R2,4541 = R736,23 ✓CA<br>12 kWh × R2,6738 = R32,0856 ✓CA<br>✓MCA<br>Total including VAT = R209,70 + R736,23 + R32,0856<br>= R978, 02 ✓CA | 1A cost for BLOCK 1<br>**R2,0970 × (100 – 0) kWh**<br>1CA cost for BLOCK 2<br>**R2,4541 × (400 – 100)kWh**<br>1CA cost for BLOCK 3<br>**R2,6738 × (412 – 400)kWh**<br>1MCA adding values.<br>1CA Answer. (5) | F L3 |
| 2.2.4 | ✓✓A<br>100%. | 2A correct percentage (2) | P L2 |
| | | **[26]** | |

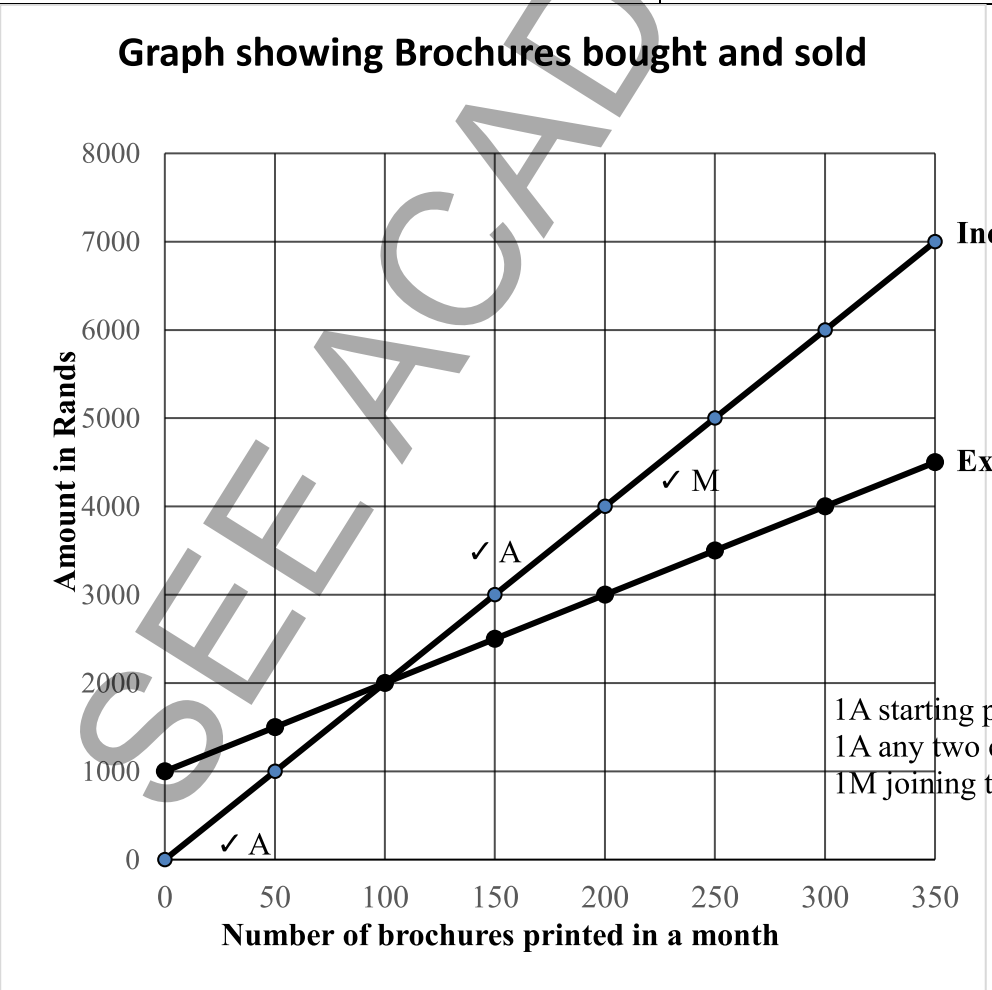
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| QUESTION/*VRAAG* 3 [15 MARKS/*PUNTE*] | | | |
|---|---|---|---|
| **Q/*V*** | **Solution / *Oplossing*** | **Explanation / *Verduideliking*** | **T/L** |
| 3.1. | ✓A ✓A<br>Discrete, can be counted and is whole numbers. | 1A Answer<br>1A Reason<br>(2) | D<br>L1 |
| 3.2 | ✓✓A<br>Observation. | 2A<br>(2) | D<br>L1 |
| 3.3 | Numbers in ascending order:<br>✓RT ✓A<br>10 , 16 , 19 , 21 , 22 , 24 , 27 , 30 , 30 , 41 | 1RT All correct values<br>1A ascending order.<br>(2) | D<br>L1 |
| 3.4 | ✓RT<br>Median = $\frac{33+36}{2}$ ✓M<br>= 34,5 ✓CA | 1RT identifying 22 and 24.<br>1M using the formula for median<br>1CA Answer<br>(3) | D<br>L2 |
| 3.5 | Mean of TOYOTA =<br>$\frac{20+24+25+29+33+36+36+43+46+58}{10}$<br>= $\frac{350}{10}$ ✓MA ✓M<br>= 35 ✓CA<br><br>Mean of VOLKSWAGEN =<br>$\frac{22+41+30+16+10+24+30+19+27+21}{10}$<br>= $\frac{240}{10}$<br>= 24 ✓CA<br><br>Difference in avarage = 35 – 24<br>= 11 ✓MCA<br><br>The son is not correct. ✓O | 1MA adding correct values.<br>1M mean concept.<br><br>1CA answer<br><br>1CA answer<br><br>1MCA for subtracting mean Values.<br>1O Conclusion<br>(6) | D<br>L4 |
| | | **[15]** | |

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| QUESTION/*VRAAG 4* [20 MARKS/*PUNTE*] | | | |
|---|---|---|---|
| **Q/*V*** | **Solution/*Oplossing*** | **Explanation/*Verduideliking*** | **T/L** |
| 4.1.1 | ✓A ✓A<br>Total expenses = R1 000 + R10 × number of brochures printed | 1A R 1000<br>1A R10 × number of brochures printed.<br>(2) | F<br>L2 |
| 4.1.2 | A = R 20 × 100<br>= R 2 000 ✓A<br><br>B = R 3 000 ÷ R20 ✓ M<br>= 150 ✓ A<br>OR<br>B = (R2 500 – R1 000) / R10<br>$= \frac{1500}{10}$ ✓ M<br>= 150 ✓ A | 1A answer<br><br>1M dividing the correct values<br>1A correct answer<br><br>1M subtracting 1000 and dividing by 10<br>1A correct answer<br>(3) | F<br>L1 |
| 4.1.3 | <br>1A starting point.<br>1A any two correct points<br>1M joining the points.<br>(3) | F<br>L2<br>M |

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| Q/V | Solution/Oplossing | Explanation/Verduideliking | T/L |
|---|---|---|---|
| 4.1.4 | Income = R20 × 160<br>= R 3 200 ✓CA<br><br>Expenses = R1 000 + R10 × 160<br>= R 2 600 ✓CA<br><br>Profit = Income – Expenses<br>= R 3 200 – R 2 600 ✓SF<br>= R 600 ✓ CA | 1CA Calculating income<br><br>1CA Calculating expenses<br><br>1SF correct substitution<br>1CA answer<br>(4) | F<br>L3 |
| 4.2.1 | ✓✓ RT<br>45 – 54. | 2RT correct age interval<br>(2) | D<br>L3 |
| 4.2.2 (a) | ✓ ✓ O<br>As of January 2024, women in the age group of 25 to 34 years accounted for 15,8 percent and men 14,9 percent of social media users in South Africa. | 2O opinion<br>(2) | D<br>L4<br>M |
| 4.2.2 (b) | ✓ ✓ O<br>Women percentage use was **higher** compared to 14.9 percent for men in the same age bracket. | 2O opinion<br>(2) | D<br>L4<br>M |
| 4.2.3 | ✓ ✓ O<br>Female social media usage is higher than that of males except in age group 35 – 44 and 45 – 54. | 2O opinion<br>(2) | D<br>L4 |
| | | **[20]** | |
| | | **TOTAL/*TOTAAL*: 75** | |

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**GRADE 11 PAPER 1** **24 May 2024**

**INSTRUCTION:**

Question **2.1.4** **MUST not be marked** as the compound interest is planned for later time in the year.

| | Question 2<br>Allocation of marks |
|---|---|
| **Actual mark** | **CONVERTED MARK** |
| 1 | 1 |
| 2 | 3 |
| 3 | 4 |
| 4 | 5 |
| 5 | 7 |
| 6 | 8 |
| 7 | 9 |
| 8 | 10 |
| 9 | 12 |
| 10 | 13 |
| 11 | 14 |
| 12 | 16 |
| 13 | 17 |
| 14 | 18 |
| 15 | 20 |
| 16 | 21 |
| 17 | 22 |
| 18 | 23 |
| 19 | 25 |
| 20 | 26 |

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