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# GRADE 12

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## MATHEMATICAL LITERACY

## MARCH TEST 1 MARKING GUIDELINES

## 11 MARCH 2025

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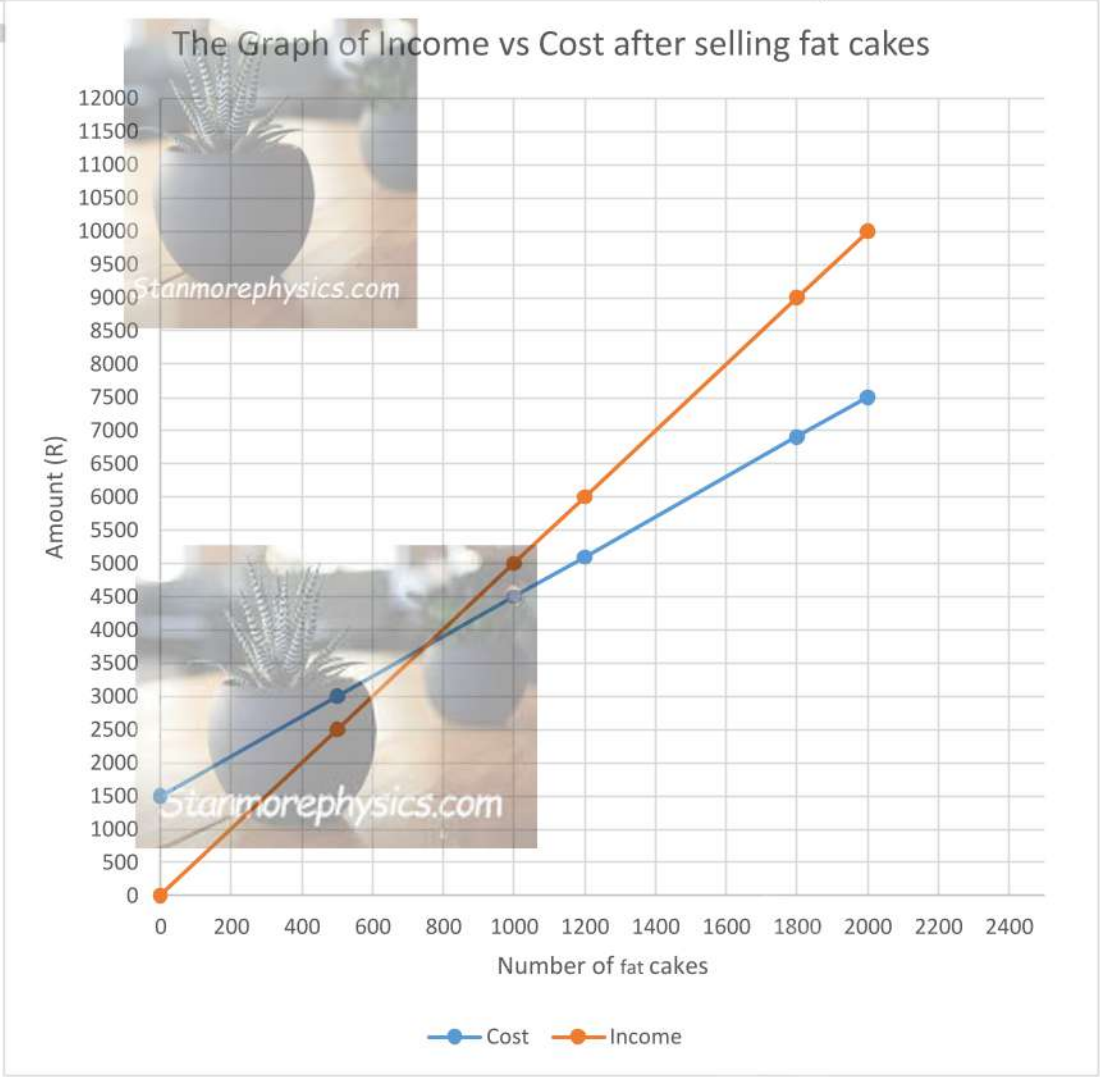
| Symbol | Explanation |
|---|---|
| **M** | Method |
| **MA** | Method with accuracy |
| **CA** | Consistent accuracy |
| **A** | Accuracy |
| **C** | Conversion |
| **S** | Simplification |
| **RT** | Reading from a table/a graph/document/diagram |
| **SF** | Correct substitution in a formula |
| **O** | Opinion/Explanation |
| **P** | Penalty, e.g. for no units, incorrect rounding off, etc. |
| **R** | Rounding off |
| **NPR** | No penalty for correct rounding minimum two decimal places |
| **AO** | Answer only |
| **MCA** | Method with constant accuracy |

**This marking guideline consists of 6 pages including cover pages.**

| **QUESTION 1** | | | | |
|---|---|---|---|---|
| Ques | | Solution | Explanation | |
| 1. | | | | |
| | 1.1 | Bonus = R11 390 – (1 400 + 1 200 + 70 + 230 + 340 + 600 + 450 + 5 000) ✓<br>= R11390 – R9 290✓MA<br>=R2 100✓A | 1MA adding all values<br>1MA subtracting<br>1A simplification<br>(3) | F |
| | 1.2 | Total Deductions = R150 + R260 + R300 + R6✓ MA<br>= R716✓ A | 1MA adding ALL correct values<br>1A simplification<br>(2) | F |
| | 1.3 | Net salary = R11 390 – R716 ✓MCA<br>= R10 674 ✓CA | **CA from 1.2**<br>1MA subtracting<br>1CA simplification<br>(2) | F |
| | 1.4 | Employee: is a person employed for wages or salary. ✓✓O | 2O explanation<br>(2) | F |
| | 1.5 | Special amount income: EOBI-Deduction<br>= 1 200: 300✓ RT<br>=1:0,25 ✓A | 1RT correct values<br>1A simplification in correct order<br>(2) | F |
| | | | | **[11]** |
| **QUESTION 2** | | | | |
| 2. | | | | |
| | 2.1 | SARS-South African revenue services ✓✓A | 2A correct answer<br>(2) | F |
| | 2.2 | Tax threshold = R17235✓RT ÷ 0.18 ✓ MA<br>R95 750✓ A | 1RT correct rebate<br>1MA dividing by 18% OR multiplying by 100/18<br>1A simplification<br>(3) | F |
| | 2.3 | R45 544.78 ×12✓ MA<br>= R546 537.36<br><br>Pension fund= (0.075 ×R546 537.36)<br>= (R40 990,302)✓ A<br><br>Donation = (R25000)✓ RT<br><br>Annual taxable Income<br>= R546 537.36 – R40 990.302 – R25 000 ✓ MCA | 1MA multiplying by 12<br><br>1A simplifying pension<br>1RT correct donations<br><br>1MCA subtraction pension and donation<br>1CA simplification<br>(5) | F |

| | | | | |
|---|---|---|---|---|
| | | = R480 547 .06 ✓ CA | | |
| | 2.4 | 77 362 + 31 %( 480 547.06 - 370 500)✓<br>=77 362 + 0.31× 110 047.06<br>=77 362 + 34 114.5886<br>=R111 476.5886<br><br>**Tax after rebates**<br>=R111 476.5886 – 17 235✓RT<br>=R94 241.5886 - 7 592 ✓MCA<br>=R76 649.5886 ÷12✓MCA<br>=R6 387.47 ✓CA<br>The statement is Valid✓O | **CA from 2.3**<br>1SF correct substitution<br><br>1RT rebate<br>1MCA subtracting medical credits<br>1MCA dividing by 12<br>1CAsimplification<br>1 O conclusion<br>(6) | F |
| | | | | **[16]** |
| **QUESTION 3** | | | | |
| 3. | | | | |
| | 3.1 | Fixed Costs = R500 + R1 000✓M<br>= R1 500✓A | 1M adding correct values<br>1A answer<br>(2) | F |
| | 3.2 | ✓RT ✓RT<br>Cost in Rands = R1 500 + R3 × n ✓A | 1RT fixed cost<br>1RT variable cost values (R3 with tariff)<br>1A equation format<br>(3) | F |
| | 3.3.1 | A= 6 000 ÷ 5✓ M<br>=1 200✓A<br><br>**OR**<br><br>A= (R5 100 – R1 500) ÷ 3 ✓ M<br>= R3 600 ÷ R3<br>= R1 200 ✓ M | 1M division<br>1A answer<br><br>1M division<br><br>1A answer<br>(2) | F |

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| | | | | |
|---|---|---|---|---|
| | 3.3.2 | B = R1 500 + R3 × n<br>= R1 500 + R3 × 1 000✓ SF<br>= R4 500✓CA | CA from 3.2<br>1SF correct substitution<br>1A simplification<br>(2) | F |
| | 3.3.3 | C= R5 × 2 000 ✓ SF<br>= R10 000 ✓A | 1SF correct substitution<br>1A simplification<br>(2) | F |
| | 3.4.1 | <br>1A starting point (0; 1 500) ✓<br>1A end point (2 000; 7 500) ✓<br>1A joining all the points plotted in a straight line✓<br>1A labelling the break-even point ✓<br>(3) | | F |
| | 3.4.2 | Break Even at 750✓A<br><br>The claim is VALID✓O | 1A break-even estimation<br>1A conclusion<br>(2) | F |
| | | | | **[17]** |

| | | | |
|---|---|---|---|
| **QUESTION 4** | | | |
| 4.1 | Value Added Tax ✓✓A | 2A correct answer (2) | F |
| 4.2 | ✓RT<br>A = 1,5351÷ 1,15 ✓MA<br>= 1,334869565<br>= 1,3349✓ A | 1RT using 1,5351<br>1MA dividing by 1.15<br>1A correct answer (3) | F |
| 4.3 | 3 = (50 * 0,8393) + (300 * 1,0779) + (250 * 1,5351) ✓A✓RT<br>= R749,11✓CA<br><br>Calculating the remaining amount<br>= R861,50 – R749,11✓MCA<br>= R112,39<br><br>Use Block 4 = R112,39 ÷ 1,6055✓MCA<br>= 70kWh✓CA<br>Total Usage = 50 + 300 + 250 + 70✓MCA<br>=670kWh✓CA | 1A correct consumption per block<br>1RT 3 correct tariffs<br>1CA simplification<br>1MCA subtracting correct values<br>1MCA dividing by tariff<br>1CA simplification<br>1MCA adding values<br>1CA simplification (8) | F |
| 4.4 | . = R279,00 + (75 – 50) × R0,99✓SF<br>= R279,00 + (25 × R0,99)<br>= R279,00+ R24,75✓M<br>= R303,75✓CA | 1SF correct substitution<br><br>1M adding the values<br>1CA answer (3) | F |
| | | | **[16]** |
| **QUESTION 5** | | | |
| 5. | | | |
| | 5.1 | . Range = Max-Min<br>5 = 18 - A ✓SF<br>A= 18 - 5<br>A = 13✓ A | 1SF substitution<br>1A answer (2) | D |
| | 5.2 | Mean = $\frac{\text{Sum of all data values}}{\text{Number of all data values}}$<br>= $\frac{651}{40}$✓MA✓MCA<br>= 16,275 ✓CA<br>= 16, 28✓R | 1MA adding<br>1MCA dividing by 40<br>1CA simplification<br>1 R rounding (4) | D |
| | 5.3 | B = $\frac{15+16}{2}$ ✓MA<br>= $\frac{31}{2}$<br>= 15,5 ✓A<br><br>C = $\frac{16+17}{2}$ ✓MA<br>= $\frac{33}{2}$ | 1MA lower quartile concept<br>1A answer<br><br>1MA median concept | D |

| | | | | |
|---|---|---|---|---|
| | | = 16,5 ✓ A<br><br>D = $\frac{17+17}{2}$ ✓ MA<br>= $\frac{34}{2}$<br>= 17 ✓ A | 1A answer<br><br>1MA upper quartile concept<br>1A answer<br>(6) | |
| | 5.4 | $\frac{30\checkmark \text{ RT}}{40\checkmark \text{RT}}$<br>= 0,75 ✓CA | 1RT correct numerator<br>1RT correct denominator<br>1CA simplification<br>**AO** (3) | P |
| | | | | **[15]** |
| | | | | **Total: 75** |

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