

## Grade 11 Maths Literacy Paper 2 MEMORANDUM

Marks: 150

Time: 3 hours

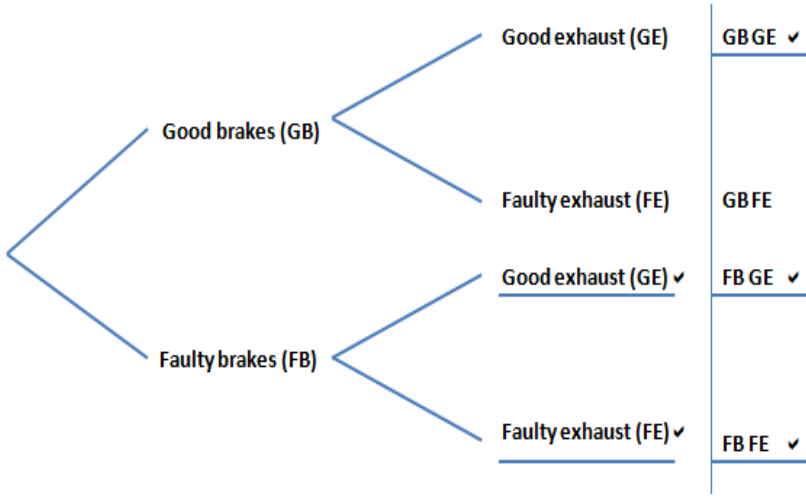
Key:

M	Method
MA	Method with accuracy
C	Calculation
S	Substitution
SF	Simplification
A	Answer
RA	Rounded answer
J	Justification

Question	Solution	Explanation	Marks
1.1.1	$0,01 \times 6\,240 \checkmark \quad 62,40 \times 2 \checkmark = R124,80 \checkmark$	1 M 1 C 1 A	(3)
1.1.2	$IRR = \frac{99779,68}{3239,6+6240} \checkmark$ $= 39,72572682 \checkmark$ $= 39,7\% \checkmark$	1 S 1 A 1 R	(3)
1.1.3	$0,397 \times 6\,240 \checkmark = R2\,477,28 \checkmark$	1 C 1 A	(2)
1.1.4	$365 \times 3 = 1\,095 \checkmark$ $1 \div 6 \times 1\,095 = 182,5 \checkmark$ $= 182 \checkmark$	1 C 1 A 1 R	(3)
1.1.5	$(2\,477,28 \times 12) \checkmark \div 365 \checkmark = R81,44 \text{ per day} \checkmark$	1 M 1 C 1 A	(3)
1.1.6	$81,44 \times 182 \checkmark = R14\,822,08 \checkmark$	1 C 1 A	(2)
1.2.1	1 L = 1 000ml		(5)

	$46 \div 1\,000 \times 350 \checkmark = R16,10 \checkmark$ for paint $34 \div 500 \times 200 \checkmark = R13,60 \checkmark$ for varnish $16,10 + 13,60 = R29,70$ for both $\checkmark$	1 C 1 A 1 C 1 A 1 A	
1.2.2	$0,40 + (3,5 \times 7) + (0,10 \times 8) \checkmark \checkmark = R25,70 \checkmark$	2 M 1 A	(3)
1.2.3	$29,70 + 25,70 \checkmark = R55,40$ each $\checkmark$	1 C 1 A	(2)
1.2.4	$1\,600 + 2\,500 = R4\,100 \checkmark$ Weekly cost = $4\,100 \checkmark + 55,40 \times$ number of birdhouses $\checkmark$	1 C 2 A	(3)
1.2.5	$4100 + (50 \times 55,40) \checkmark = R6\,870 \checkmark$	1 S 1 A	(2)
1.2.6 a)	$2\,400 \div 20 \checkmark = R120$ / birdhouse $\checkmark$ <i>(learner may use any values to find the correct answer)</i>	1 C 1 A	(2)
1.2.6 b)	$100 \times 120 = R12\,000$ (A) $\checkmark \checkmark$ $120 \times 120 = R144\,000$ (B) $\checkmark \checkmark$ $140 \times 120 = R16\,800$ (C) $\checkmark \checkmark$	2 A 2 A 2 A	(6)
1.2.7	Line graph on ANNEXURE 2 labels (income and expenses) $\checkmark \checkmark$ Any 3 correct points $\checkmark \checkmark \checkmark$ Break-even correct $\checkmark$		(6)
1.2.8	Break-even = $64 \checkmark \checkmark$ (accept 63 – 66)	2 A	(2)
2.1	$8 - 2,5 - 4 = 1,5$ m $7 - 3 = 4$ m $\checkmark$ $4\text{m} \checkmark \times 1,5\text{m} \checkmark$	1 M  1 A 1 A	(3)
2.2	$4 \times 1,5 = 6\text{ m}^2 \checkmark \checkmark$	2 A	(2)
2.3	$6 \times 129,95 \checkmark = R779,70 \checkmark$	1 C 1 A	(2)
2.4	$(3 \times 4) \checkmark + (4 \times 4) \checkmark + (3 \times 4) \checkmark = 40\text{ m}^2 \checkmark$	3 M 1 A	(4)
2.5.1	$40 \div 1,4 \checkmark = 28,57$ = 29 packs $\checkmark$	1 C 1 RA	(2)
2.5.2	$29 \times 169,80 \checkmark = R4\,924,20 \checkmark$ $4924,20 + 779,70 \checkmark = R5\,703,90 \checkmark$	1 C 1 A 1 C	(6)

	$6\ 000 - 5\ 703,90 = 296,10$ He will have enough ✓ with R296,10 left over ✓	1 A 1 A 1 J	
2.6.1	$\text{Radius} = 2 \div 1 = 1$ ✓ $V = 3,142 \times 1^2 \times 1,2$ ✓ $= 3,7704\ \text{m}^3$ ✓ $90\ \text{cm} \div 100 = 0,9\text{m}$ ✓ $V = 3,142 \times 0,9^2 \times 0,9$ ✓ $= 2,290518$ ✓ $3,7704 - 2,290518$ ✓ = $1,479882$ $= 1,5\ \text{m}^3$ ✓	1 radius 1 S 1 A  1 converting 1 S 1 A  1 C 1 A	(8)
2.6.2	$1,5 \times 100^3$ ✓ = $1\ 500\ 000\ \text{cm}^3$ ✓ $= 1\ 500\ 000\ \text{ml}$ ✓	1 M 1 A 1 converted	(3)
3.1.1	From O.R. Tambo take the M1 South ✓ Turn right onto M70 (Soweto Highway) ✓ Stadium Entrance is on the left ✓	3 A	(3)
3.1.2	$2,4\text{cm} = 300\ \text{m}$ (accept $2,3\ \text{cm} = 300\text{m}$ ) Distance = $6\ \text{cm}$ ✓ (accept $5,8 - 6,2$ ) $(6 \div 2,4)$ ✓ $\times 300$ ✓ = $750\text{m}$ ✓ (accept $725 - 800\ \text{m}$ ) $750\ \text{m} = 0,75\ \text{km}$ $T = \frac{0,75}{8}$ ✓ $= 0,09375\ \text{hours}$ $0,09375 \times 60$ ✓ = $5,6\ \text{minutes}$ ✓ (accept $5,4 - 6\ \text{minutes}$ )	1 measurement 2 M 1 A  1 C  1 C 1 A	(7)
3.1.3	$0,750 \div 1,6$ ✓ = $0,46875\ \text{miles}$ $= 0,47\ \text{miles}$ ✓ (accept $0,45 - 0,5\ \text{miles}$ )	1 C  1 A	(2)
3.1.4	N ✓ ✓	2 A	(2)
3.1.5	M1 north ✓ ✓	2 A	(2)
3.1.6	Left ✓ ✓	2 A	(2)
4.1.1	Windscreen Wipers ✓ ✓	2 A	(2)
4.1.2	$1 \div 10 \times 1000$ ✓ = $100$ ✓	1 C	(2)

		1 A	
4.1.3	$19 \div 20 \checkmark \times 100 = 95\% \checkmark$	1 C 1 A	(2)
4.1.4	Light bulbs $\checkmark \checkmark$	2 A	(2)
4.1.5	$1 \div 40 \times 3\,500 \checkmark = 87,5$ $= 88 \checkmark$	1 C 1 A	(2)
4.1.6		5 A	(5)
4.1.7	No $\checkmark$ as the incidents to not have equal chances of occurring separately $\checkmark \checkmark$	1 A 2 J	(3)
4.2.1	0; 1; 2; 2; 3; 4; 4; 4; 5; 5; 6; 7; 8; 12; 13 $\checkmark \checkmark$	2 A	(2)
4.2.2	4 $\checkmark \checkmark$	2 A	(2)
4.2.3	4 $\checkmark \checkmark$	2 A	(2)
4.2.4	$76 \checkmark \div 15 \checkmark = 5 \checkmark$	2 values 1 A	(3)
4.2.5	$13 = 0 = 13 \checkmark \checkmark$	2 A	(2)
4.2.6	Yes, $\checkmark$ there are many insects counted in the bush in just one day. $\checkmark \checkmark$ No, $\checkmark$ there could be hundreds more insects before there is a problem. $\checkmark \checkmark$ (Accept either answer with sufficient justification)	1 A 2 J	(3)
4.2.7	76 $\checkmark \checkmark$	2 A	(2)
4.2.8	$836 \div 76 \checkmark = 11 \text{ days } \checkmark \checkmark$	1 M 1 C 1 A	(3)
4.2.9	Table:	18 $\div$ 2	(9)



ANNEXURE – QUESTION 1.2.7

