NATIONAL SENIOR CERTIFICATE EXAMINATION
MAY 2024

MATHEMATICAL LITERACY: PAPER II

MARKING GUIDELINES

Time: 3 hours 150 marks

These marking guidelines are prepared for use by examiners and sub-examiners, all of whom are required to attend a standardisation meeting to ensure that the guidelines are consistently interpreted and applied in the marking of candidates' scripts.

The IEB will not enter any discussions or correspondence about any marking guidelines. It is acknowledged that there may be different views about some matters of emphasis or detail in the guidelines. It is also recognised that, without the benefit of attendance at a standardisation meeting, there may be different interpretations of the application of the marking guidelines.

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QUESTION 1

Q. Nr	Possible Solution	Cognitive Level
	Note: all variations of rounded solutions will be discussed in Standardization Meeting.	
1.1.1	Superspar OR Spar	1
1.1.2	5	1
1.1.3	Length = $\sqrt{121}$ $= 11$ m	1
1.1.4	11 ÷ 10 × 13 = 14,3 m	1
1.2.1	3 : 5	1
1.2.2	$\frac{6}{7} \times 500$ ml = 428,57 ml = 430 ml	1
1.2.3	÷ R0,09/ml accept R0,0857/ml YES	1
1.2.4	Inverse	1
1.3.1	1 litre	1
1.3.2	4,4 cm	1
1.3.3	C	1
1.3.4	cm^3 accept ml	1
1.4	228 ÷ 76 × 3 = 9 cups of coffee	1

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QUESTION 2

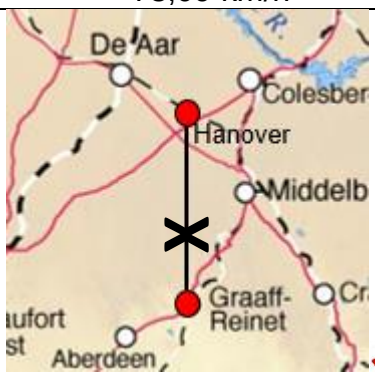
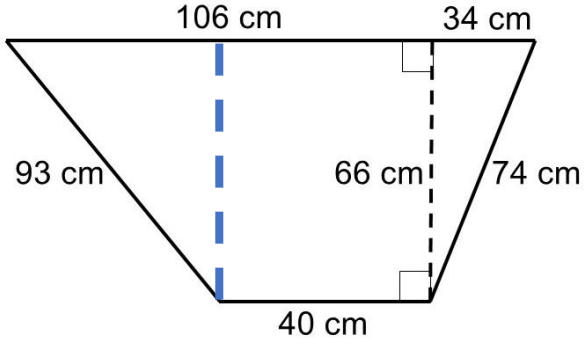
2.1.1	Restaurant	1
2.1.2	6	1
2.1.3	Huguenot Str and Bordeaux Str	1
2.1.4	WNW accept W or NW	1
2.2		2

Ingredients	**Mass**	**Quantity**	**TOTAL MASS**
1 cup of flour	85 g	1	85 g
1 cup of sugar	201 g	$\frac{3}{4}$	150,75 g
1 cup of oats	136 g	1	136,00 g
1 cup of cranberries or chocolate chips	100 g	$\frac{3}{4}$ cups	75 g
1 cup of sunflower oil	227 g	$\frac{1}{2}$	113,5 g
1 teaspoon (baking powder, baking soda, salt, ground cinnamon)	5 g	2,5 tsp	12,5 g
1 tablespoon (Cocoa powder, chia seeds)	15 g	4	60g
TOTAL MASS OF GLASS JAR:			**632,75 g**

2.3	$\frac{3}{2} \times 12{,}3$ $= 18{,}45$ cm	2
2.4	Diameter of cookie = 70 mm = 7 cm Length of box = 20 cm ÷ 7 = 2,86 = 2 cookies Width of box = 2 cookies Height of box = 5 cm ÷ 0,85 = 5,88 = 5 cookies 2 × 2 × 5 = 20 cookies per box 80% × 20 = 16 cookies per box 16 × R1,30 = R 20,80 per box	3
2.5.1	B	2
2.5.2	Chocolate chip cookies	2

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QUESTION 3

3.1.1		4
3.1.2	Speed = $53{,}6 \div \frac{44}{60}$ = 73,09 km/h	3
3.2.1	 ✓^{a} ✓^{a}	4
3.2.2	2 cm ÷ 1,4 × 100 km = 142,86 km	2
3.3.1	36 kg : 2,8 kg 90 : 7	2
3.3.2	0,09995847 = 0,1 m³ 0,1 × 100³ = 100 000 cm³	2
3.3.3 (a)	 Volume of Rectangular Prism = 40 cm × 66 cm × 70 cm	4

	= 184 800 cm³ Volume of Triangular Prism (left) = (0,5 × 66 cm × 66 cm) × 70 cm = 152 460 cm³ Volume of Triangular Prism (Right) = (0,5 × 34 cm × 66 cm) × 70 cm = 78 540 cm³ Total Volume = 415 800 cm³ OR Area of Trapezium × height = 0,5(40 + 106 + 34) × 66 × 70 = 415 800 cm³	
3.3.3 (b)	Area of trapeziums (2) = 0,5 × (40 cm + 140 cm) × 66 cm × 2 = 11 880cm² Area of base = 70 cm × 40 cm = 2 800 cm² Area of slanted side (left) = 70 cm × 93 cm = 6 510 cm² Area of slanted side (right) = 70 cm × 74 cm = 5 180 cm² Total Surface Area = 26 370 cm²	3

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QUESTION 4

4.1	79 ° accept 78 and 80	1
4.2.1	2,25 ÷ 2 × 2,54 cm = 2,8575 cm	2
4.2.2	Length and width = 4 × (2,8575 × 2) = 22,86 cm Height = 5,715 cm	4
4.2.3	$\frac{1}{2}$	2
4.3.1	Area of room = 16 ft × 18 ft = 288 ft² 288 ÷ 10,7639 = 26,756 m²	2
4.3.2	Dimensions of playing area Length: 3,1 + (2 × 1,45) = 6 m Width: 1,27 + (2 × 1,45) = 4,17 Area of playing area 6 × 4,17 = 25,02 m² Percentage of total room area 25,02 ÷ 26,756 × 100 = 93,51 %	4
4.4	$\sqrt{293^2 - 237^2}$ = 172,27 cm	2
4.5	$3{,}142 \times radius^2$ Radius = 134 + 10 mm = 144 3,142 × 144² = 65 152,512 mm² accept 65 144,065 (if used pi)	3

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QUESTION 5

5.1	6 × 2 = 12 pipes 12 × 10 = 120 m	2
5.2	168 ÷ 12 = 14 plants per pipe 10 m – 10 cm 10 m – 0,1 m = 9,9 m for planting available 9,9 m ÷ 14 = 0,707 m apart OR 70,7 cm apart	3
5.3	1 969 000 000 m³ × 1 000 = 1 969 000 000 000 litres in total used (Trad farming) 0,01 × 1 969 000 000 000 = 19 690 000 000 litres	3
5.4.1	31 000 × 240 = 7 440 000 tonnes	1
5.4.2	7 440 000 × 1 000 = 7 440 000 000 kg of lettuce = Seven billion, four hundred and forty million	2
5.5	1. E 2. A 3. D 4. B 5. F 6. C	1
5.6.1	$\frac{5}{13}$ accept 0,3846	2
5.6.2	$\frac{3}{11}$ accept 0,272727…	4
5.6.3	$\frac{5}{13} \times \frac{4}{12} \times \frac{3}{11} = \frac{5}{143}$ accept 0,03496	2

Total: 150 marks

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