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education
Department:
Education
PROVINCE OF KWAZULU-NATAL

PINETOWN DISTRICT – MATHEMATICAL LITERACY

GRADE: 11
ASSESSMENT TYPE: November - Paper 2 2022
MARKING GUIDELINE

Symbols	Explanation
M	Method
MA	Method with accuracy
CA	Consistent Accuracy
A	Accuracy
C	Conversion
RT/RG/RM	Reading from Table/Graph/Map.
F	Choosing the correct formula
SF	Substitution in Formula
J	Justification
P	Penalty
R	Reason

QUESTION NUMBER	SOLUTION	MARK EXPLANATION	MARKS	SECTION & TAX LEVEL
1.1.1	Cylinder √√	2A	2	M L1
1.1.2	$r = \frac{d}{2}$ $r = \frac{400cm}{2}$ √ r = 200cm 200cm/100 √ = 2m √	1MA 1C (÷ 100) 1CA	3	M L2
1.1.3	¾ x 8,5m √ =6,375m / 6,38m √	1M 1R	2	M L2
1.1.4	C √√	2A	2	M L1
1.2.1	Strip Map √√	2A	2	MP L1
1.2.2	B√√	2A	2	MP L1
1.2.3	557km – 69km√ =488km√	1MA (CORRECT VALUES) 1CA	2	MP L2

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1.2.4	N3 √ N5 √	1RM 1RM	2	MP L1
1.2.5	Right √√	2A	2	MP L1
2.1.1	1029 km√√	2A	2	MP L2
2.1.2	CT TO JHB = 1402km√ JHB TO BLM = 417km√ 1402km + 417km = 1819km √ CT TO NEL = 1779km√ Diff: 1819km – 1779km = 40km√ Yes, their claim is valid √	 2RT 1CA 1RT 1CA 1J	6	MP L4
2.1.3	Distance = Speed x Time 1393 = 105 x t √ $t = \frac{1393}{105}$ √ t = 13 hrs 16min√ Time of journey: 13hrs 16mins + 1hr 15mins√ = 14hrs 31 min √	 1 SF (For 1393 & 105) 1 M 1CA 1 M (Adding 1:15) 1CA	5	MP L2
2.2.1	Bar Scale √√	2A	2	MP L1
2.2.2	0,9cm√ : 5km 2,9cm√ is measured length 2,9 ÷ 0,9 × 5km√ = 16,1 km√ **OR** 0,9cm√ : 5km 3cm√ is measured length 3 ÷ 0,9 × 5km√ = 16,67 km√ **OR** 0,9cm√ : 5km 3,1cm√ is measured length 3,1 ÷ 0,9 × 5km√ = 17,22 km√	1A (ACCEPT BAR AS 1cm) 1A (ACCEPT 2,9 TO 3,1cm as measured length between the two places on map) 1M 1CA 1A 1A 1M 1CA 1M 1A 1M 1CA **Note: 14,5km / 15km / 15,5km will be full marks if bar scale measured as 1cm and either 2,9cm/3cm/3,1cm is measured length respectively.**	4	MP L3

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2.2.3	South East √√	2A	2	MP L1
2.2.4	870m = 2850ft 870 x 100cm√ = 2 850ft 87 000cm = 2 850ft√ $=\frac{87\,000}{2\,850}$ √ 1 ft = 30,53 cm√	 1C 1M 1M 1CA	4	M L2
3.1.1	152,5cm √ + 15,25cm + 15,25√ =183cm√	2A 1CA	3	M L2
3.1.2	L = 274cm = 2740 mm W = 152,5cm = 1525mm } √ 2 740mm – 1 525mm√ =1 215mm √ OR 274cm – 152,5cm√ = 121,5cm × 10√ = 1215mm√	 1 C 1CA 1 CA 1MA 1CA 1CA	3	M L3
3.1.3	10:08 + 1hr 58 min√ = 12:06pm√	1M 1A	2	M L1
3.1.4	Height = 76 + 15,25√ = 91,25 cm√ Width = 152,5 cm 152 – 91,25√ =61,25cm√ His claim is invalid√	1MA 1A 1CA 1CA 1J	5	M L4
3.2.1	Perimeter = 100 + **40** √ + 20 + 120 + 60 + 60 + 20 + **60** √+ **40**√ + 40 = 560cm √	3MA (addition with correct missing values in bold) 1CA	4	M L3
3.2.2	**Shape 1:** L: 100cm W: 40cm $L=\frac{100}{100}$ $W:\frac{40}{100}$ = 1m = 0,4m **Area: L x B** **1 x 0,4** $0,4m^2$√	 1A	5	M L3

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	Shape 2: W : 60 – 20 = 40cm L: 120cm L: 120cm W: 40cm L = $\frac{120}{100}$ W: $\frac{40}{100}$ = 1,2m = 0,4m **Area: L x B** **1,2 x 0,4** $0{,}48m^2$√ **Shape 3:** L: 60cm W: 20cm L = $\frac{60}{100}$ W: $\frac{20}{100}$ = 0,6m = 0,2m **Area: L x B** **0,6 x 0,2** $0{,}12m^2$√ **Total area : 0,4m² + 0,48m² + 0,12m² √** $= 1m^2$ √	1A 1A 1M ADDING 1CA		
3.2.3	Area = $1l$ x 2coats x 3 shapes√ = $6m^2$√ $\frac{6}{6{,}2} = 0{,}967\ litres\ needed$√ 1 litre covers 6,2m² Therefore TRUE, 1 litre is sufficient √	1CA from 3.2.2 1A 1A 1J	4	M L4
3.2.4	Radius = $\frac{1.5m}{2}$ = 0,75m√ 5 000 $l = 5\ m^3$ V = πr^2 x h $5m^3 = 3{,}142\ x\ 0.75m^2$ x h h = $\frac{5\ m^3}{3{,}142\ x\ 0.75m^2}$√ = 2.83m√ OR accept **h = 282.91 cm**	1MA 1C 1SF 1CA	4	M L3

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	Shape 2: W : 60 – 20 = 40cm L: 120cm L: 120cm W: 40cm $L = \frac{120}{100}$ $W: \frac{40}{100}$ = 1,2m = 0,4m **Area: L x B** **1,2 x 0,4** $0{,}48m^2$√ **Shape 3:** L: 60cm W: 20cm $L = \frac{60}{100}$ $W: \frac{20}{100}$ = 0,6m = 0,2m **Area: L x B** **0,6 x 0,2** $0{,}12m^2$√ **Total area : 0,4m² + 0,48m² + 0,12m²** √ $= 1m^2$ √	1A 1A 1M ADDING 1CA		
3.2.3	Area = 1l x 2coats x 3 shapes√ = $6m^2$√ $\frac{6}{6{,}2} = 0{,}967\ litres\ needed$√ 1 litre covers 6,2m² Therefore TRUE, 1 litre is sufficient √	1CA from 3.2.2 1A 1A 1J	4	M L4
3.2.4	Radius = $\frac{1.5m}{2}$ = 0,75m√ 5 000 l = 5 m^3 V = πr^2 x h $5m^3 = 3{,}142\ x\ 0.75m^2$ x h h = $\frac{5\ m^3}{3{,}142\ x\ 0.75m^2}$ √ = 2.83m√ OR accept **h = 282.91 cm**	1MA 1C 1SF 1CA	4	M L3

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4.1.1	Tree Diagram√√	2A	2	P L1
4.1.2	P = Boy √ Z = GBB √	1A 1CA	2	P L1
4.1.3	A) $\frac{4\sqrt{}}{8\sqrt{}}$ $=\frac{1}{2}$√	1RT 1RT 1CA	3	P L1
	B) P (BGB) = $\frac{1}{8}$ x 100√ 12,5% √	1S 1A	2	P L1
4.2.1	Overweight √√	2A	2	M L1
4.2.2	$=\frac{175}{100}$ =1,75m√ 25,1 = $\frac{mass\ in\ kg}{1,75 \times 1,75}$√ Mass = BMI x $height^2$ Mass = 25,1 x $(1,75)^2$ √ Mass in Kg = 76, 86875 kg Mass in kg = 76, 87kg / 76,9kg√	 1C 1SF 1M 1CA	4	M L2
4.2.3	• Exercise • Change his diet • Drink lots of water Accept any logical answer √√	2O	2	M L2
4.3.1	No of Candles: L : 24cm/8cm = 3√ W: 16cm/8cm = 2√ H: 24cm **-1cm** / 11 = 2√ Total number of candles: = 3 x 2 x 2√ = 12 candles√ Statement is correct √	 1CA 1CA 1CA 1M 1A 1J	6	MP L4
4.3.2	TA = 2(H x L) + 2 (B x H) 2 (0,24 x 0,24) + 2 (0,16 x 0,24) √ $0,1152m^2 + 0,0768m^2$√ $0,192m^2$ √	 1SF 1M 1A	3	M L2

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TOTAL: 100 MARKS

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MATHEMATICAL LITERACY
TAXONOMY LEVELS

TASK: November Paper 2 - 2022 GRADE: 11

QUESTION	MARK	TOPICS								
		FINANCE	MEASUREMENT	MAPS AND PLANS	DATA HANDLING	PROBABILITY	TAXONOMY LEVEL 1 (KNOWLEDGE)	TAXONOMY LEVEL 2 (ROUTINE)	TAXONOMY LEVEL 3 (COMPLEX)	TAXONOMY LEVEL 4 (PROBLEM SOLVING)
1.1.1	2		2				2			
1.1.2	3		3					3		
1.1.3	2		2					2		
1.1.4	2		2				2			
1.2.1	2			2			2			
1.2.2	2			2			2			
1.2.3	2			2				2		
1.2.4	2			2			2			
1.2.5	2			2			2			
2.1.1	2			2				2		
2.1.2	6			6						6
2.1.3	5			5				5		
2.2.1	2			2			2			
2.2.2	4			4					4	
2.2.3	2			2			2			
2.2.4	4			4				4		
3.1.1	3		3					3		
3.1.2	3		3						3	
3.1.3	2		2				2			
3.1.4	5		5							5
3.2.1	4		4						4	
3.2.2	5		5						5	
3.2.3	4		4							4
3.2.4	4		4						4	
4.1.1	2					2	2			
4.1.2	2					2	2			
4.1.3 (a)	3					3	3			
4.1.3 (b)	2					2	2			
4.2.1	2		2				2			
4.2.2	4		4					4		
4.2.3	2		2					2		
4.3.1	6		6							6
4.3.1	3		3					3		
WEIGHTING (as per CAPS) (±5)	100						30%	30%	20%	20%
% WEIGHTING	100						29%	30%	20%	21%

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