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**GRADE 11**

**NOVEMBER 2020**

**MATHEMATICAL LITERACY P2  
MARKING GUIDELINE  
(EXEMPLAR)**

**MARKS: 100**

<b>Symbol</b>	<b>Explanation</b>
<b>M</b>	Method
<b>M/A</b>	Method with Accuracy
<b>MCA</b>	Method with Consistent Accuracy
<b>CA</b>	Consistent Accuracy
<b>A</b>	Accuracy
<b>C</b>	Conversion
<b>S</b>	Simplification
<b>RT/RG/RM</b>	Reading from a table OR Reading from a graph OR Read from map
<b>F</b>	Choosing the correct formula
<b>SF</b>	Substitution in a formula
<b>J</b>	Justification
<b>P</b>	Penalty, e.g. for no units, incorrect rounding off etc.
<b>R</b>	Rounding Off OR Reason
<b>AO</b>	Answer only
<b>NPR</b>	No penalty for rounding

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This marking guideline consists of 5 pages.  
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QUESTION 1 [21 MARKS]			
Ques.	Solution	Explanation	Topic & Level
1.1.1	Temperature reading = 30 °C ✓✓A	2A Correct reading (2)	M L1
1.1.2	°F = 100 °F ✓✓A	2A °F (2)	M L1
1.1.3	Minimum °Fahrenheit = minus 42°F <b>OR</b> -42°F ✓✓A	2A Min °F (2)	M L1
1.1.4	Thermometer 1 : Thermometer 2 = $\frac{90}{9}$ : $\frac{20}{2}$ ✓RD ✓M = 9 : 2 ✓CA	1RD Both values correct 1M Correct order 1CA Simplified ratio (3)	M L1
1.2.1	Number of houses = 18 ✓✓A	2A Correct number of houses (2)	M L1
1.2.2	Hospital ✓✓A	2A Correct building (2)	M L1
1.2.3	Café ✓✓A	2A Correct business (2)	M L1
1.2.4	Length of the bar = 1,5 cm ✓✓A	2A Correct length (2)	M L1
1.2.5	1,5 cm on the map represents 50 yards in reality ✓✓A	<b>CA from 1.2.4</b> 2A Explanation (2)	M L1
1.2.6	3 houses ✓✓A	2A Number of houses more (2)	M L1
		<b>[21]</b>	

QUESTION 2 [26 MARKS]			
Ques.	Solution	Explanation	Topic & Level
2.1.1	Circumference is the distance or length around the lamp shade ✓✓A	2A Explanation (2)	M L1
2.1.2	$\text{Radius} = \frac{200}{10} \checkmark C$ $= \frac{20}{2} \checkmark M$ $= 10 \text{ cm} \checkmark CA$	1C mm to cm  1M Divide by 2 1CA Radius (3)	M L2
2.1.3	Circumference of lamp shade = $\pi \times \text{diameter}$ $= 3,142 \times 20 \text{ cm} \checkmark SF$ $= 62,84 \text{ cm} \checkmark MCA$	<b>CA from 2.1.1</b> 1SF Substitution 1MCA Circumference (2)	M L2
2.1.4	Height of lamp shade = $20 \text{ cm} \times 1,65 \checkmark M$ $= 33 \text{ cm} \checkmark A$ Statement invalid ✓O	1M Multiply by 1,65 1A Height 1O Invalid (3)	M L4
2.1.5	Area of lampshade = $\pi \times \text{radius} \times \text{radius}$ $= 3,142 \times 10 \text{ cm} \times 10 \text{ cm} \checkmark SF$ $= 314,2 \text{ cm}^2 \checkmark MCA$ Area including wastage = $314,2 \text{ cm}^2 \times 1,0425 \checkmark M$ $= 327,5535 \text{ cm}^2 \checkmark CA$ $\approx 328 \text{ cm}^2 \checkmark R$	<b>CA from 2.1.1</b> 1SF Substitution 1MCA Area of lamp shade 1M Multiply by 1,0425 1CA Area including wastage 1R Nearest $\text{cm}^2$ (5)	M L3
2.2.1	Number of parts = 22 parts ✓✓A	2A Number of parts (2)	M&P L2
2.2.2	$P_{(\text{set screw})} = \frac{2}{22} \checkmark A$ $= 0,090909.... \checkmark MCA$ $\approx 0,091 \checkmark R$	<b>CA from 2.2.1</b> 1A Number of set screws 1MCA 1R 3 dec places (3)	P L2
2.2.3	To prevent shocking ✓✓R <div style="text-align: center;"><b>OR</b></div> For safety purposes <b>Accept any other relevant reasons</b>	2R Reason (2)	M&P L4
2.2.4	Bulbs can break/damage ✓✓R	2R Explanation (2)	M&P L4
2.2.5	To connect Stem 2 with Stem 3 ✓✓A	2A Explanation (2)	M&P L4

QUESTION 3 [33 MARKS]			
Ques.	Solution	Explanation	Topic & Level
3.1.1	Southwest ✓✓A North ✓✓A	2A Southwest 1A North (4)	M&P L2
3.1.2	Scale refers to the relationship (ratio) between distance on a map and the corresponding distance on the ground (reality) ✓✓A	2A Definition (2)	M&P L1
3.1.3	Measure bar = 1,8 cm ✓A (Accept 1,7 cm to 1,9 cm) 1,8 cm = 2 km 1,8 cm = 200 000 cm ✓C ∴ 1 cm = 111 111, 111 ✓S ∴ 1 : 111 000 ✓R	1A Measure bar 1C km to cm  1S Simplification 1R Nearest '000 (4)	M&P L3
3.1.4	Speed = $\frac{\text{Distance}}{\text{Time}}$ $65 \text{ km/h} = \frac{18,2 \text{ km}}{\text{Time}}$ ✓M Time = $\frac{18,2 \text{ km}}{65 \text{ km/h}}$ ✓M = 0,28...h ✓A = 16,8 min ✓C = 17 minutes Time of arrival = 14:53 + 17 minutes ✓M = 15:10 ✓CA	1SF Substitution 1M Changing subject of formule 1A Time in hours 1CA Time in min 1M Add times 1CA Arrival time (6)	M&P L3
3.1.5	Because of the (Indian) ocean ✓✓R	2R Reason (2)	M&P L4
3.2.1	Steak = 0,454 kg ✓✓A	2A Kilogram (2)	M L1
3.2.2	Salt = $0,5 \times 5 \text{ ml}$ = 2,5 ml ✓MA Black pepper = $0,25 \times 5 \text{ ml}$ = 1,25 ml ✓CA Total = 2,5 ml + 1,25 ml = 3,75 ml ✓CA	1MA Millilitres  1CA Millilitres  11CA Total (3)	M L2
3.2.3	1 cup broth = 250 ml ✓MA $\frac{3}{4}$ cup whipping cream = $0,75 \times 250 \text{ ml}$ = 187,5 ml ✓MA $\frac{1}{4}$ cup sour cream = $0,25 \times 250$ = 62,5 ml ✓MA Total = 250 ml + 187,5 ml + 62,5 ml = 500 ml = 0,5 litres ✓CA Statement is valid ✓O	1MA 250 ml  1MA 187,5 ml  1MA 62,5 ml  1CA Litre 1O Valid (5)	M L4

3.2.4	Cooking time ✓M = (3 min × 2) + 8 min + 1 min + 1 min + 2 min + 20 min + 2 min = 40 minutes ✓CA	1M Multiply by 2 1MCA Adding all times 1CA Total time (3)	M L2
3.2.5	Time for preparation should also be considered. ✓✓A	2A Reason (2)	M L4

QUESTION 4 [20 MARKS]			
Ques.	Solution	Explanation	Topic & Level
4.1.1	6 seats ✓✓A	2A No of seats (2)	M&P L1
4.1.2	Raised Seating Area = 112 seats ✓A Flat Seating Area = 85 seats ✓A Difference = 112 – 85 ✓M = 27 seats ✓CA	1A Seats in RSA 1A Seats in FSA 1M Subtract 1CA Difference (4)	M&P L3
4.1.3	$P_{(L-row)} = \frac{12}{197}$ ✓A ✓MCA	1A Numerator 1MCA Denominator (CA from 4.1.2) (2)	M&P L2
4.1.4	Walk to A5, then turn right ✓A Walk straight pass the Row D ✓A Third Row (G) third seat ✓A <b>Accept any other relevant responses</b>	1A Straight 1A Turn right 1A 3 <sup>rd</sup> row, 3 <sup>rd</sup> seat (3)	M&P L4
4.2.1	Volume of drum = $\pi \times \text{radius} \times \text{radius} \times \text{height}$ ✓C ✓A = 3,142 × 29 cm × 29 cm × 93 cm ✓SF = 245 745, 246 cm <sup>3</sup> ✓CA Litres = 245 745, 246 cm <sup>3</sup> ÷ 1 000 cm <sup>3</sup> = 245,745 litres ✓CA	1C mm to cm 1A Radius 1SF Substitution 1CA Volume 1CA Litres (5)	M L3
4.2.2	<ul style="list-style-type: none"> <li>The volume of advertisement refers to the maximum the drum can hold. ✓✓A</li> <li>The calculated volume refers to the entire drum. ✓✓A</li> </ul>	2A 1 <sup>st</sup> Reason 2A 2 <sup>nd</sup> Reason (4)	M L4
		<b>TOTAL:</b>	<b>100</b>