education

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NORTH WEST PROVINCE

PROVINCIAL ASSESSMENT

GRADE 10

MATHEMATICAL LITERACY P1

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MARKING GUIDELINES

MARKS: 75

Symbol	Explanation
M	Method
M/A	Method with accuracy
CA	Consistent accuracy
A	Accuracy
C	Conversion
S	Simplification
RT/RG/RD	Reading from table/graph/diagram
SF	Correct substitution in formula
O	Opinion/Example
P	Penalty, e.g. for no units /incorrect rounding, etc.
R	Rounding off
AO	Answer only full marks
NPR	No penalty for rounding

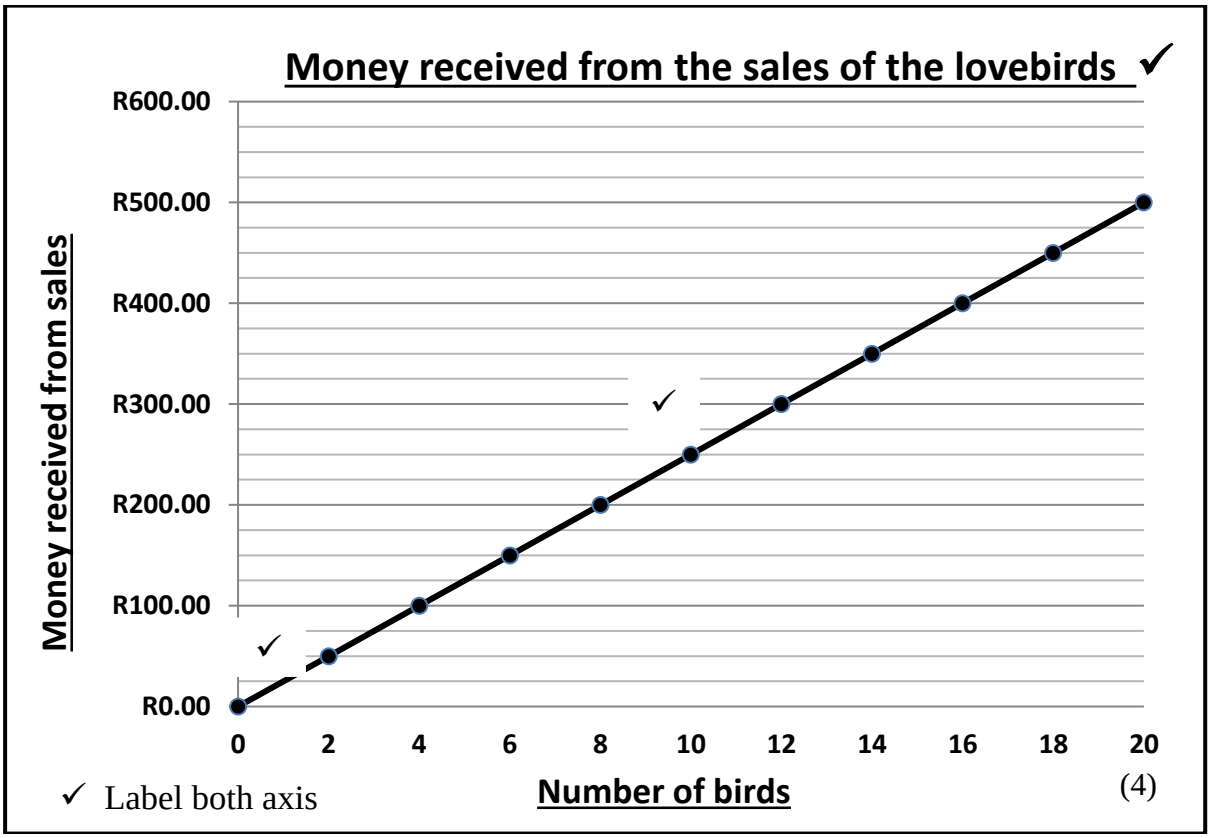
These marking guidelines consist of 6 pages and 1 page with cognitive levels.

QUESTION 1 [18]			
Ques.	**Solution**	**Explanation**	**Topic Level**
1.1.1	80 + 120 ✓ = 200 lovebirds in total ✓	1M Adding 1A Answer – Total birds (2)	Data L 1
1.1.2	200 ÷ 5 cages ✓ = 40 birds per cage ✓	*CA Question 1.1.1* 1M Divide with 5 1A Answer – Per cage (2)	Data L 1
1.1.3	Yellow : Green 80 ✓ : 120 ✓ 2 : 3 ✓	2MA Correct ratio 1A Simplification (3)	Data L 2
1.1.4	Probability (yellow bird) $= \frac{80\ ✓}{200\ ✓}$ $= \frac{2}{5}$ = 0,4 ✓	*CA Question 1.1.1* 1M Numerator 1M Denominator 1A Answer – Decimal number (3)	Prob L 2
1.2.1	Sunseed ✓✓	2RT Read from picture (2)	Data L 1
1.2.2	1,3 kg × 5 cages ✓ = 6,5 kg per day ✓ 6,5 kg × 7 days per week ✓ = 45,5 kg per week ✓ **OR** 1,3 kg × 7 days ✓ = 9,1 kg per week ✓ 9,1 kg × 5 cages ✓ = 45,5 kg ✓ **OR** 1 × 5 cages ✓ = 5 cages per day × 1,3 kg ✓ = 6,5 kg × 7 days per week ✓ = 45,5 kg ✓	1M Multiply with 5 1A Answer – kg per day 1M Multiply with 7 1CA Answer – kg per week **OR** 1M Multiply with 7 1A Answer – kg per week 1M Multiply with 5 1CA Answer – Total kg per week **OR** 1M Multiply with 5 1M Multiply with 1,3 1M Multiply with 7 1CA Answer – kg per week (4)	Meas L 3
1.2.3	1000 mℓ = 1 ℓ 800 mℓ ÷ 1 000 ✓ = 0,8 ℓ ✓	1C Divided with 1 000 1A Answer – Litre (2)	Meas L 1
		[18]	

QUESTION 2 [20]			
Ques.	**Solution**	**Explanation**	**Topic Level**
2.1	Radius = Diameter ÷ 2 Radius = 6 cm ÷ 2 ✓ = 3 cm ✓	1MA Divide with 2 1A Answer – Radius (2)	Meas L 1
2.2	$\boldsymbol{Area\ of\ circle = \pi r^2}$ $Area\ of\ circle = 3{,}142 \times 3^2$ ✓ = 3,142 × 9 cm^2 = 28,278 cm^2 = 28,28 ✓ cm^2 ✓	1SF Substitute formula 1A Answer – Area 1U Unit – cm^2 (3)	Meas L 2
2.3	$\boldsymbol{Vol = length \times width \times height}$ $Volume = 17\ cm \times 13\ cm \times 25\ cm$ ✓ Volume = 5 525 cm^3 ✓	1SF Substitute formula 1A Answer – Volume (2)	Meas L 2
2.4	221 cm^2 × $\frac{8}{100}$ = 17,68 cm^2 ✓ 221 cm^2 + 17,68 cm^2 ✓ = 238,68 cm^2 ✓ **OR** 100% + 8% = 108% ✓ 221 cm^2 × $\frac{108}{100}$ ✓ = 238,68 cm^2 ✓ **OR** 221 = 100% x = 108% ✓ $\frac{221 \times 108}{100}$ ✓ **OR** 221 × 1,08 = 238,68 cm^2 ✓	1A Answer – 8% 1M Adding of 8% 1A Answer – Area roof **OR** 1A Answer – 108% 1M Multiply with 108% 1A Answer – Area roof **OR** 1M Adding of 8% 1M Multiply with 108% 1A Answer – Area roof (3)	Meas L 2
2.5.1	Wood glue = R50,00 per bottle ✓✓	2RT Read from table (2)	Finan L 1
2.5.2	9 nails needed ✓✓	2RT Read from table (2)	Finan L 1
2.5.3	0,2 m^2 × R650,00 ✓ = R130,00 ✓	1M Multiply with R650 1A Answer – Total cost (2)	Finan L 2
2.5.4	Total expenses = R130,00 + R4,50 + R2,50 + R50,00 ✓ = R187,00 ✓	*CA Question 2.5.3* 1M Adding of expenses 1A Answer – Total expenses (2)	Finan L 2

2.5.5	How many boxes build = R2 000,00 ÷ R187,00 per box ✓ = 10,69518717 ≈ 10 boxes ✓	*CA Question 2.5.4* 1M Divide with cost per box 1A Answer – Amount of boxes (ROUNDING down) **P – NOT rounded down** (2)	Finan L 2
		[20]	

QUESTION 3 [10]			
Ques.	**Solution**	**Explanation**	**Topic Level**
3.1	Independent variable = Number of birds ✓✓	2A Answer – Independent variable (2)	Data L 1
3.2	25 birds × R25 ✓ = R125 ✓	1M Multiply with R25 1A Answer – Cost of 5 birds (2)	Data L 1
3.3	**ANSWER SHEET** Graph below	1A Heading 1A Label both x-axis and y-axis 1A Starting point (0;0) 1A Point (10;250) (4)	Data L 1 L 2
3.4	Discrete data (whole number) ✓✓	2A Answer – Discrete data (2)	Data L 1
		[10]	



QUESTION 4 [17]			
Ques.	**Solution**	**Explanation**	**Topic Level**
4.1.1	Cost per person @ Moses Mabhida = R50 + R70 ✓ = R120 ✓	1M Adding of costs 1A Answer – Cost per person (2)	Finan L 1
4.1.2	Cheapest activity = Moses Mabhida Stadium ✓✓	2RT Read from table (2)	Finan L 1
4.1.3	Duration of afternoon train trip 16:00 – 12:30 ✓ = 3,5 hours ✓ **OR** = 3 hours 30 min ✓	1M Subtract times 1A Answer – Duration of trip (2)	Meas L 1
4.2.1	Tel no: 031 632 6209 ✓✓	2RT Read from bill (2)	Finan L 1
4.2.2	September month ✓✓ **OR** 9th Month ✓✓	2RT Read from bill **OR** 2RT Read from bill (2)	Finan L 1
4.2.3	Flavour milkshake = Chocolate ✓✓	2RT Read from bill (2)	Finan L 1
4.2.4	VAT = R258,50 × $\frac{15}{115}$ ✓ VAT = R33,71739130 VAT ≈ R33,72 ✓ **OR** $\frac{R258,50}{1,15}$ = R224,78 ✓ R258,50 – R224,78 = R33,72 ✓	1MA Multiply with 15/115 1A Answer – VAT **OR** 1A Answer – Amount without VAT 1A Answer – VAT (2)	Finan L 2
4.2.5	Tip = R258,50 × $\frac{10}{100}$ ✓ Tip = R25,85 ✓ Tip ≈ R26,00 ✓R	1MA Multiply with 10% 1A Answer – Tip 1RA Rounded Answer (3)	Finan L 2
		[17]	

QUESTION 5 [10]			
Ques.	**Solution**	**Explanation**	**Topic Level**
5.1	12 rows ✓✓	2RT Read from map (2)	M+P L 1
5.2	Row G = 28 seats ✓✓	2RT Read from map (2)	M+P L 1
5.3	Wheelchairs seats = 6 ✓	2RT Read from map (2)	M+P L 1
5.4	D8 to D15 = 7 seats moved to the right ✓✓	2RT Read from map (2)	M+P L 1
5.5	M3 / M4 / M5 / M6 ✓✓ *Name any ONE seat number*	2RT Read from map (2)	M+P L 1
		[10]	

	COGNITIVE LEVELS				OUTCOMES				
Quest	**Level 1: Knowing**	**Level 2: Applying routine procedures**	**Level 3: Applying multi-step procedures**	**Level 4: Reasoning and reflecting**	**Finance**	**Measurement**	**Maps and Plans**	**Data handling**	**Probability**
1.1.1	2							2	
1.1.2	2							2	
1.1.3		3						3	
1.1.4		3							3
1.2.1	2							2	
1.2.2			4			4			
1.2.3	2					2			
Ques.1	**8**	**6**	**4**	**0**	**0**	**6**	**0**	**9**	**3**
2.1	2					2			
2.2		3				3			
2.3		2				2			
2.4		3				3			
2.5.1	2				2				
2.5.2	2				2				
2.5.3	2				2				
2.5.4		2			2				
2.5.5		2			2				
Ques.2	**8**	**12**	**0**	**0**	**10**	**10**	**0**	**0**	**0**
3.1	2							2	
3.2	2							2	
3.3	2	2						4	
3.4	2							2	
Ques.3	**8**	**2**	**0**	**0**	**0**	**0**	**0**	**10**	**0**
4.1.1	2				2				
4.1.2	2				2				
4.1.3		2				2			
4.2.1	2				2				
4.2.2	2				2				
4.2.3	2				2				
4.2.4		2			2				
4.2.5		3			3				
Ques.4	**10**	**7**	**0**	**0**	**15**	**2**	**0**	**0**	**0**
5.1	2						2		
5.2	2						2		
5.3	2						2		
5.4	2						2		
5.5	2						2		
Ques.5	**10**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**0**
	44	**27**	**4**	**0**	**25**	**18**	**10**	**19**	**3**
	59%	**36%**	**5%**	**0%**	**34%**	**24%**	**13%**	**25%**	**4%**
Policy	**45**	**26**	**4**	**0**	**26**	**15**	**11**	**19**	**4**
%	**60%**	**35%**	**5%**	**0%**	**35%**	**20%**	**15%**	**25%**	**5%**