MEMORANDUM

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GRADE 11 EXAMINATIONS
GRAAD 11-EKSAMEN

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MATHEMATICAL LITERACY – SECOND PAPER

This memorandum consists of 9 pages.

QUESTION 1

1.1	Part-time job at cafeteria. ✓ This could vary depending on the amount of hours she works. (OR any other suitable answer)	✓ Answer ✓ Justification (2)
1.2	Book and library fees. / Rent ✓ These are fixed amounts that have to be paid every month.✓	✓ Answer ✓ Justification (2)
1.3	Toiletries, telephone and bank fees. These are the smallest amounts found in her budget.	✓ Answer ✓ Justification (2)
1.4	Food and transport. These are the bigger amounts in her budget.	✓ Answer ✓ Justification (2)
1.5	July $= \frac{431{,}28}{11{,}50} = 37{,}50\ hrs$ ✓ August= $\frac{333{,}50}{11{,}50} = 29\ hrs$ ✓ The hours worked in August are less than those worked in July.	✓ Calculation ✓ Calculation ✓Explanation (3)
1.6.1	R10,40 – R9,72 = R0,68 ✓ % increase = $\frac{0{,}68}{9{,}72} = 0{,}0699 \times 100 = 6{,}999 = 7\%$ ✓	✓ Method ✓ Answer as percentage (2)
1.6.2	Estimated percentage increase 7% of R235,00 = 0,07 x R235 = R16,45 ✓ Estimated expenditure on petrol for next few months: R235+ R16,45 = R251,45 ✓	✓ Method ✓ Answer (2)
1.7.1	Transaction fee = R4,50 + 0,005(300) ✓ = R6,00 ✓	✓ Method ✓ Answer (2)
1.8.1	Transaction fee = R1,47 + 0,007(600) = R5,67 ✓ Transaction fee = R4,50 + 0,005(519)= R7,10 ✓ Total for both transactions = R12,77 ✓	✓ Method and answer ✓ Method and answer ✓ Final answer (3)

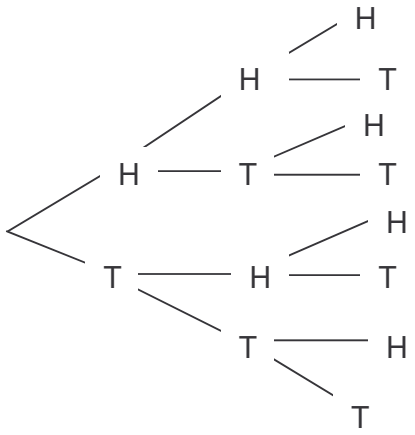
1.8.2	Transaction fee = R200 x 4 No charge ✓ Transaction fee = R1,19 + 0,006(100) =R1,79 x 3 ✓ =R5,37 Transaction fee = R1,19 + 0,006(800) = R5,99✓ Total for both transactions = R11,36 ✓	✓ Interpretation ✓ Method (times by 3) ✓ Method ✓ Answer (4)
1.8.3	The second one is better if you want to pay less in bank charges. The first one may cost more in terms of bank charges, but is a safer option, because you do not have to draw so much money at one time and make use of electronic options for the larger amounts, ✓✓ OR Any other logical answer.	✓ Choosing an option or case. ✓ Justification (2)
		[26]

QUESTION 2

2.1.1	R 300 000 000✓ or R300 million	✓ Answer (1)
2.1.2	2005 ✓	✓ Answer (1)
2.1.3	For giving any reasonable answer such as both export and imports were on the increase. However, the growth in export was more than the growth in import. ✓ ✓ OR Stating that over the years the balance of trade grew more favourable.	✓✓ Answer (2)
2.1.4	For identifying the year as 2007✓. For saying that in 2007 the export was more than the import. ✓ ✓	✓ Answer ✓✓ Reason (2)
2.2.1	Identifying February or March (or any of the two months) ✓ For stating that the exchange rate was highest in these two months ✓ and the tourist from the US could get more rands for the dollars during February and March ✓ OR equivalent statements.	✓ Answer ✓✓ Reason (2)
2.2.2	For identifying November as the best month. ✓ OR For stating that the exchange rate was the lowest in November ✓ The travelers could get more dollars for the money they convert ✓ OR equivalent statements.	✓ Answer ✓ Reason (2)

2.2.3	Yes, the number of tourists will increase ✓✓	✓✓ Answer (2)
2.3.1	Mode = 75 kg ✓	✓Answer/✓Method(2)
2.3.2	For arranging the number in the order ✓ For stating the median = 75 kg ✓	✓ Method ✓ Answer (2)
2.3.3	For stating that there are 10 boys who are 75 kg and less or there are 10 boys who are 75 kg OR more than 75 kg ✓✓ OR stating that 50% (1/2) of the boys are 75 kg or less OR Stating that 50% of the boys are 75 kg or more	✓ Method ✓ Answer (2)
2.3.4	For calculating the mean mass $= \frac{1469}{20}$ ✓✓ (✓ for adding to get 1 469 and ✓ for dividing by 20) = 73,45 kg ✓	✓✓ Method ✓ Answer (3)
		[21]

QUESTION 3

3.1.1	For stating the probability = $\frac{4}{5}$ ✓✓ (or 1 – $\frac{1}{5}$ = $\frac{4}{5}$) ✓✓	✓✓ Answer (2)
3.1.2	For taking the probability = $\frac{4}{5}$ ✓ For converting to percentage = $\frac{4}{5}$ x 100 = 80% ✓	✓ Answer ✓ Answer (2)
3.2.1	For writing the probability = ½ √	✓ Answer (1)
3.2.2	For drawing the tree diagram  For correctly starting with H and T ✓ For drawing the second set of arrows correctly ✓ For drawing the third set of arrows correctly ✓ (at least 2 sets)	✓✓ Method and ✓ Answer (3)
3.2.3 (a)	For stating the probability as $\frac{1}{8}$ ✓✓ (Picking from the diagram)	Answer (2)
3.2.3 (b)	For stating the probability as $\frac{1}{8}$ ✓ (picking from the diagram	Answer (1)
3.2.3 (c)	For stating the probability as $\frac{7}{8}$ ✓ (Picking from the diagram) OR For calculating the probability as 1 - $\frac{1}{8}$ = $\frac{7}{8}$ ✓	Answer (1)
3.3.1	Graph 2	Answer (1)
3.3.2	The scale on the vertical axis (y-axis) has been stretched or expanded ✓ to include more values. ✓	Answer (2)
		[15]

QUESTION 4

4.1.1	Area = $l \times b$ = 4 x 7,2 ✓ = 28,8 m^2 ✓	✓ Method ✓ Answer (2)
4.1.2	Area of surface A = ½ x (2,5 + 0,75) x 7 ✓✓ = 11,375 m^2 ✓	✓✓ Method ✓ Answer (3)
4.1.3	Area of surface B = 4 x 2,5 ✓ = 10 m^2 ✓	✓ Method ✓ Answer (2)
4.1.4	Area of surface C = 4 x 0,75 = 3 m^2 ✓	✓ Answer and Method (1)
4.1.5	Total surface area = [28,8 + 2 x (11,375) ✓+ 10 + 3] m^2 ✓ = 64,55 m^2 ✓	✓✓Method ✓ Answer (3)
4.2.1	$V = \pi r^2 h$ = 3,14 x $(0,375)^2$✓ x 1,25✓ = 0,55 m^3 ✓ (= 550 ℓ) Yes ✓	✓✓✓ Method ✓ Answer (4)
4.3.1	No. of cans = $\frac{500\ \ell}{1{,}25\ \ell}$ ✓ = 400 cans ✓	✓ Method ✓ Answer (2)
4.3.2	No. of crates = $\frac{400}{12}$ ✓ = 33 crates ✓ OR No. of crates = $\frac{500\ \ell}{1{,}25\ \ell \times 12}$ = 33 crates ✓	✓ Method ✓ Answer (2) ✓ Method ✓ Answer (2)
4.3.3	For one crate = 12 x 1,25 ℓ ✓ = 15 ℓ ✓ ∴ cost per crate = 15 ℓ x R5,80 ✓ = R 87,00 ✓	✓ Method ✓ Answer ✓ Method ✓ Answer (4) **[23]**

QUESTION 5

5.1	7,3 cm : 100 km x : 200 km ✓ ∴ 100 x = 7,3 x 200 $x = \frac{7,3 \times 200}{100}$ = 14,6 cm ✓ OR 7,3 cm = 100 km ✓ ∴ 200 km is double 7,3 x 2 = 14,6 cm ✓	✓ Method ✓ Calculation (2)
5.2	7,3 cm : 100 km ✓ 1 cm : x 7,3x = 100 x 1 $x = \frac{100 \times 1}{7,3}$ = 13,6987 km OR 13,7 km ✓	✓ Method ✓ Calculation (2)
5.3	Distance on the map = 7 cm ✓ 1 cm = 14 km ✓ 7 cm = 14 x 7 = 98 km ✓	✓Estimation ✓Method ✓Answer (3)
5.4	47º ✓✓	✓✓Answer (2)
5.5	NW ✓	✓Answer (1)
5.6	C2 ✓	✓Answer (1)
5.7	Mokolo Dam Nature Reserve ✓ Doorndraai Dam Nature Reserve ✓	✓✓Answer (2)
5.8	They both have dams ✓	✓ Answer (1)
5.9	Botswana ✓	✓Answer (1)
		[15]

TOTAL: 100

Q	Context Detail	Item	Learning Outcomes				Taxonomy Level		Sub-tot	Total	
			LO1	LO2	LO3	LO4	L 2 20%	L 3 40%	L 4 40%		
1	Zandi's finances	1.1	2				2			2	26
		1.2	2				2			2	
		1.3	2				2			2	
		1.4		2				1	1	2	
		1.5		3				2	1	3	
		1.6.1	2				2			2	
		1.6.2		2			2			2	
		1.7		2			1	1		2	
		1.8.1		3			1	2		3	
		1.8.2		4			1	3		4	
		1.8.3		2					2	2	
2	Interpretation of Graphs	2.1.1		1					1	1	21
		2.1.2		1					1	1	
		2.1.3				2			2	2	
		2.1.4				2			2	2	
		2.2.1				2			2	2	
		2.2.2		2					2	2	
		2.2.3		2					2	2	
		2.3.1		2				2		2	
		2.3.2	2			2		2		2	
		2.3.3				2		2		2	
		2.3.4	2			1	1	2		3	
3	Probability Data handling	3.1.1				2	2			2	15
		3.1.2	1			1	2			2	
		3.2.1				1	1			1	
		3.2.2				3		3		3	
		3.2.3.(a)				2		2		2	
		3.2.3.(b)				1	1			1	
		3.2.3.(c)				1	1			1	
		3.3.1				1			1	1	
		3.3.2				2			2	2	
4	Space and shape	4.1.1			2		1	1		2	23
		4.1.2			3		1	2		3	
		4.1.3			2		1	1		2	
		4.1.4			1			1		1	
		4.1.5			3			3		3	
		4.2.1			4			2	2	4	
		4.3.1			2		2	2		4	
		4.3.2			2			2		2	
		4.3.3			4			4		4	
		5.1	2					1	1	2	
		5.2	2					1	1	2	

5	Map work	5.3	3					3		3	
	and	5.4			2				2	2	
	Grid work	5.5			1				1	1	15
		5.6			1				1	1	
		5.7			2				2	2	
		5.8			1				1	1	
		5.9			1				1	1	
			20	26	29	25	26	44	30	100	100

TOTAL: 100