



MATHEMATICAL LITERACY PAPER 1 MEMORANDUM

- 1.1.1 $41,57\text{c/kWh} + 24,8\% = 51,88\text{c/kWh}$
 1.1.2 $51,88\text{c/kWh} + 25,8\% = 65,27\text{c/kWh}$
 $65,27\text{c/kWh} + 25,9\% = 82,17\text{c/kWh}$
 1.1.3 $\% \text{ change} = (82,17 - 41,57)/41,57 = 97,67\%$

1.2.1 24 389 GWh

1.2.2 4%

1.2.3 (a) $15\% \times 213\,881 = 32\,082\text{ GWh}$

(b) $\frac{59\,965}{213\,881} = 28\%$

Note – alternate approaches are possible.

1.3.1 ≈ 154 (accept 154 ± 2)

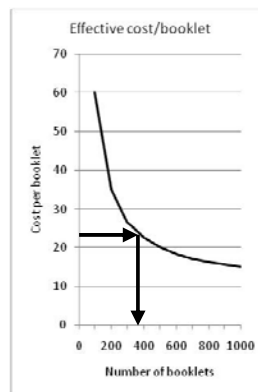
1.3.2 75% of 200 = 150

2.1

No. of booklets	100	300	500	700
Printing costs	6000	8000	10000	12000
Eff cost per booklet	R60	R26,67	R20,00	R17,14

2

2.2.1



correct points
shape of curve
labeling of axis

6

2.2.2 (a) 380 ± 10

(b) see marking on graph for (2.2.1)

2.3 Income – expenses = profit

$$23 \times \text{bks} - (5\,000 + 10 \times \text{bks}) = 5\,000$$

$$13 \times \text{bks} = 10\,000$$

$$\text{bks} \approx 770$$

5

2.4 770 booklet $\neq$ 800 booklets

$$\text{Cost} = 5\,000 + 8 \times 1\,000 = \text{R}13\,000$$

3

3.1 Missing values only

	Debit	Credit	Balance
20 Feb		R 1 150,00	-R 6 850,00
28 Feb	-R 137,00		-R 6 987,00
25 Mar		R 3 450,00	-R 3 537,00
31 Mar	-R 70,74		-R 3 607,74

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3.2	To settle loan: $\text{income} \geq \text{R}3\ 607$ $3\ 607 \div 23 \approx 157$ She must sell at least 157 booklets.	3	7.1.2	$\approx 32\%$	2
3.3	To break even Maxine must also cover her own investment of $\text{R}5\ 000$. To break even: $\text{income} \geq \text{R}5\ 000$ $5\ 000 \div 23 \approx 218$ She must sell at least 218 booklets.	4	7.1.3	$\approx 100\% - 25\% = 75\%$	2
4.1.1	$\text{R}46\ 000$	2	7.2	% using alcohol after 16 $\approx 80\% - 34\% = 46\%$ $\backslash \text{ number} = 46\% \times 470 \approx 220$	5
4.1.2	$\text{R}12\ 960$	2	7.3	We cannot say. Some students may have used more than one of the substances listed. Since the totals of usage for all of the substances exceed 100%, it is possible that all of the respondents used one (or more) of the substances and we cannot be sure that any respondent used none.	4
4.2	$\text{R}95\ 000 \times 18\% = \text{R}17\ 100$ $\text{R}17\ 100 - \text{rebate}$ $= \text{R}17\ 100 - \text{R}8\ 280$ $= \text{R}8\ 820$	5			
4.3.1	Tax payable $= 70\ 650 + (350\ 000 - 305\ 000) \times 35\% - 8\ 280$ $= 70\ 650 + 15\ 750 - 8\ 280$ $= \text{R}78\ 120$	5			
4.3.2	Effective tax rate $= \frac{78\ 120}{350\ 000}$ $= 22,32\%$	3			
5.1.1	1 day	2			
5.1.2	7 days	2			
5.1.3	2 tablets daily	2			
5.2	1 day before trip + 10 days of trip + 7 days after trip = 18 days 18 days = 18 tablets	4			
5.3.1	Adult tablets: $2 \times (1 \text{ day} + 8 \text{ days} + 7 \text{ days})$ $= 2 \times 16 \text{ days} = 32 \text{ days}$ $= 32 \text{ adult tablets}$	5			
5.3.2	Child 1 (18 kg) = 16 days $\times$ 1 tablet/day $= 16 \text{ tablets}$ Child 2 (36 kg) = 16 days $\times$ 3 tablet/day $= 48 \text{ tablets}$ $\backslash \text{ } 64 \text{ pediatric tablets}$	6			
5.3.3	Cost $= 32 \times 12 + 64 \times 8 = \text{R}896$	3			
6.1	The first sheet is 40 m long. The second sheet overlaps the first sheet by 1m leaving 39 m of additional canvas to cover the pitch. $40 \text{ m} + 39 \text{ m} = 79 \text{ m}$ Since $79 \text{ m} > 78 \text{ m}$ – this sheet will cover the pitch and surroundings from one side to the other.	5			
6.2	Working edge to edge the sheets cover: $17 \text{ m} + 16 \text{ m} + 16 \text{ m} + 16 \text{ m} + \dots$ The total distance to be covered must be $> 115 \text{ m}$ $\backslash \text{ } 8 \text{ widths will be needed}$ (check $17 + 7 \times 16 = 129 \text{ m}$)	6			
6.3	Number of rolls needed $= 2 \times 8 = 16$	2			
6.4	Area of pitch and surroundings: $= 115 \text{ m} \times 78 \text{ m} = 8\ 970 \text{ m}^2$ Total area of canvas $= 16 \times 40 \text{ m} \times 17 \text{ m} = 10\ 880 \text{ m}^2$ % extra $= \frac{10\ 880 - 8\ 970}{8\ 970} \approx 21\% \text{ extra}$	6			
7.1.1	Cigarettes, glue, alcohol and cannabis	2			

