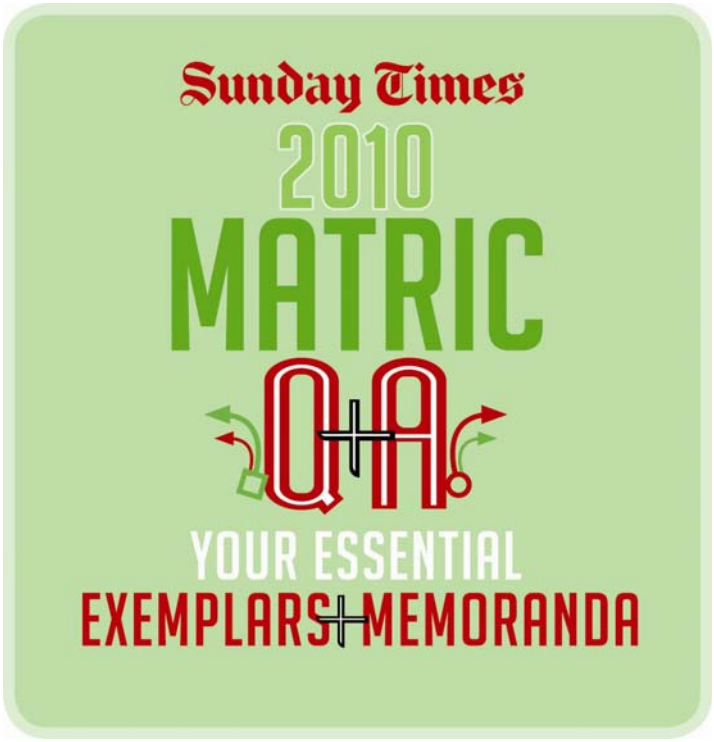

MATHEMATICAL LITERACY PAPER 1 MEMORANDUM

1.1.1 41,57c/kWh + 24,8% = 51,88c/kWh 2

1.1.2 51,88c/kWh + 25,8% = 65,27c/kWh
65,27c/kWh + 25,9% = 82,17c/kWh 4

1.1.3 % change = $(82{,}17-41{,}57)/41{,}57.$ =
97,67% 3

1.2.1 24 389 GWh 2

1.2.2 4% 2

1.2.3 (a) 15% × 213 881 = 32 082 GWh
(b) $\frac{59\ 965}{213\ 881} = 28\%$
Note – alternate approaches are possible. 6

1.3.1 ≈ 154 (accept 154 ± 2) 2

1.3.2 75% of 200 = 150 3

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

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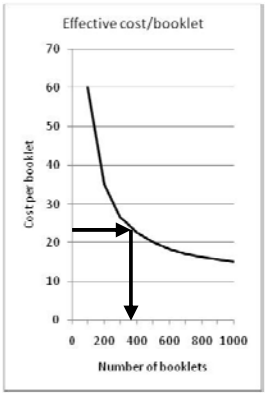
2.2.1



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 × bks – (5 000 + 10 × bks) = 5 000
13 × bks = 10 000
bks ≈ 770 5

2.4 770 booklet Þ 800 booklets
Cost = 5 000 + 8 × 1 000 = R13 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: income ≥ R3 607
3 607 ÷ 23 ≈ 157
She must sell at least 157 booklets. 3

3.3 To break even Maxine must also cover her own investment of R 5 000.
To break even: income ≥ R5 000
5 000 ÷ 23 ≈ 218
She must sell at least 218 booklets. 4

4.1.1 R 46 000 2

4.1.2 R 12 960 2

4.2 R 95 000 × 18% = R17 100
R 17 100 – rebate
= R 17 100 – R 8 280
= R 8 820 5

4.3.1 Tax payable
= 70 650 + (350 000 – 305 000) × 35% – 8 280
= 70 650 + 15 750 – 8 280
= R78 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 × (1 day + 8 days + 7 days)
= 2 × 16 days = 32 days
= 32 adult tablets 5

5.3.2 Child 1 (18 kg) = 16 days × 1 tablet/day
= 16 tablets
Child 2 (36 kg) = 16 days × 3 tablet/day
= 48 tablets
\ 64 pediatric tablets 6

5.3.3 Cost = 32 × 12 + 64 × 8 = 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 m + 39 m = 79 m
Since 79 m > 78 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 m + 16 m + 16 m + 16 m + …
The total distance to be covered must be > 115 m
\ 8 widths will be needed
(check 17 + 7 × 16 = 129 m) 6

6.3 Number of rolls needed = 2 × 8 = 16 2

6.4 Area of pitch and surroundings:
= 115 m × 78 m = 8 970 m^2
Total area of canvas
= 16 × 40 m × 17 m = 10 880 m^2
% extra $= \frac{10\ 880 - 8\ 970}{8\ 970} \approx 21\%$ extra 6

7.1.1 Cigarettes, glue, alcohol and cannabis 2

7.1.2 ≈ 32% 2

7.1.3 ≈ 100% - 25% = 75% 2

7.2 % using alcohol after 16
≈ 80% - 34% = 46%
\ number = 46% × 470 ≈ 220 5

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

