

**MATHEMATICAL LITERACY**

**(PAPER 1)**

**JUNE 2008**

**MEMORANDUM**

TIME: 3 HOURS  
MARKS: 150



**education**

Western Cape Education Department

**NATIONAL STRATEGY FOR LEARNER ATTAINMENT**

**NATIONAL SENIOR CERTIFICATE**

**MEMORANDUM**

This memorandum consists of **10** pages

**Please note:**

- Penalize once only for money units in Question 1.2.4.
- Penalize once only for rounding in Question 1.4.4.
- Penalize once only for units  $m/m^2/m^3$  in Question 5.1.2

**QUESTION 1 [27]**

1.1			
1.1.1	498 ✓✓	Ans. (2)	(2)
1.1.2	6 ✓✓	Ans. (2)	(2)
1.1.3	42 kilograms ✓	Ans. (1)	(1)
1.1.4	62 learners ✓✓	Ans. (2)	(2)

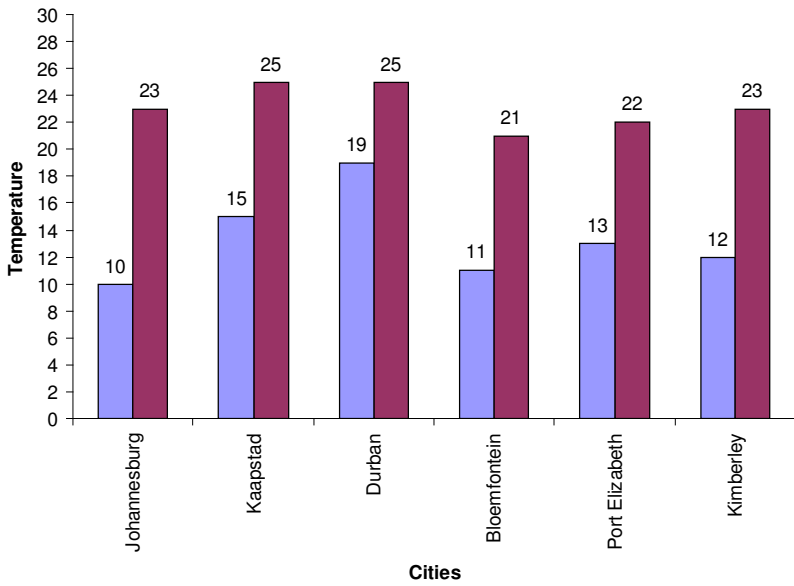
1.2			
1.2.1	50 % ✓	Ans. (1)	(1)
1.2.2	0,8 ✓	Ans. (1)	(1)
1.2.3	8 : 1 ✓✓	Ans. (2)	(2)
1.2.4	R 200 ✓✓	Ans. (2)	(2)
1.2.5	$\frac{1}{4}$ ✓✓	Ans. (2)	(2)

1.3			
1.3.1	33% ✓	Ans. (1)	(1)
1.3.2	High cost of living ; no jobs ; etc ✓	Ans. (1)	(1)
1.3.3	67 ✓ : 33 ✓	Ans. (2)	(2)

1.4			
1.4.1	Pick n Pay or PnP ✓	Ans. (1)	(1)
1.4.2	1,296 kg ✓	Ans. (1)	(1)
1.4.3	R60,85 ✓	Ans. (1)	(1)
1.4.4	$R46,95 \times 3,5 \checkmark = R164,33 \checkmark$	Method (1) Ans. (1)	(2)
1.4.5	1 kg = 1 hour 500 gram = 30 minutes Total time = 1hour + 30 minutes ✓ + 30 minutes (extra) ✓ = 2 hours ✓	Method (2) Ans. (1)	(3)

**QUESTION 2 [23]**

<b>2.1</b>			
2.1.1	500 litre ✓✓	Ans. (2)	<b>(2)</b>
2.1.2	$\frac{10}{12} \times 18 \checkmark = 15 \text{ days } \checkmark\checkmark$	Method (1) Ans. (2)	<b>(3)</b>

<b>2.2</b>																								
2.2.1	Friday ✓ 12 April ✓	Ans. (2)	<b>(2)</b>																					
2.2.2	11 hours ✓ 33 minutes ✓	Ans. (2)	<b>(2)</b>																					
2.2.3	(a) Nelspruit ✓ (b) Bloemfontein ✓ 21°C ✓ (c) Durban ✓✓	Ans. (1) Ans. (2) Ans. (2)	<b>(5)</b>																					
2.2.4	See graph Heading : Minimum and Maximum Temp. of Cities or any suitable heading ✓ All six cities maks. temp. drawn correct ✓✓✓✓✓✓	Ans. (1) Method (6)	<b>(7)</b>																					
 <table border="1"> <caption>Temperature Data from Graph</caption> <thead> <tr> <th>City</th> <th>Minimum Temperature</th> <th>Maximum Temperature</th> </tr> </thead> <tbody> <tr> <td>Johannesburg</td> <td>10</td> <td>23</td> </tr> <tr> <td>Kaapstad</td> <td>15</td> <td>25</td> </tr> <tr> <td>Durban</td> <td>19</td> <td>25</td> </tr> <tr> <td>Bloemfontein</td> <td>11</td> <td>21</td> </tr> <tr> <td>Port Elizabeth</td> <td>13</td> <td>22</td> </tr> <tr> <td>Kimberley</td> <td>12</td> <td>23</td> </tr> </tbody> </table>				City	Minimum Temperature	Maximum Temperature	Johannesburg	10	23	Kaapstad	15	25	Durban	19	25	Bloemfontein	11	21	Port Elizabeth	13	22	Kimberley	12	23
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Bloemfontein	11	21																						
Port Elizabeth	13	22																						
Kimberley	12	23																						
2.2.5	Yes ✓ There was a 30% chance of thunder / 70% chance of no thunder. There could have been thunder or no thunder. ✓	Ans. (1) Reason (1)	<b>(2)</b>																					

**QUESTION 3 [12]**

3.1			
3.1.1	bio classic ✓ or washing powder	Ans. (1)	(1)
3.1.2	R34,95 ✓	Ans. (1)	(1)
3.1.3.1	R5,00 ✓	Ans. (1)	(1)
3.1.3.2	$\frac{5}{34,95} \times 100 \checkmark = 14,31\% \checkmark$	Method (1) Ans. (1)	(2)

3.2			
3.2.1	<p>Jeans 1 : <math>\frac{35}{100} \times R359,00 = R125,65 \checkmark</math></p> <p>Cost of Jeans: <math>R359,00 - R125,65 = R233,35 \checkmark\checkmark</math></p> <p>Jeans 2 : <math>\frac{1}{5} \times R299,00 = R59,80 \checkmark</math></p> <p>Cost of Jeans: <math>R299,00 - R59,80 = R239,20 \checkmark\checkmark</math></p>	<p>Method (1)</p> <p>Ans. (2)</p> <p>Method (1)</p> <p>Ans. (2)</p>	(6)
3.2.2	Jeans 1	Ans. (1)	(1)

<b>QUESTION 4 [20]</b>			
<b>4.1</b>			
4.1.1	Dan Carter ✓ Crusaders ✓	Ans. (1) Ans. (1)	(2)
4.1.2	Derick Hougaard ✓ $15 \times 3 = 45$ ✓	Ans. (1) Ans. (1)	(2)
4.1.3	21 ✓✓	Ans. (2)	(2)
4.1.4	$\frac{779}{14}$ ✓✓ = 55,64 ✓✓	Method (2) Ans. (2)	(4)
4.1.5	0 ✓✓	Ans. (2)	(2)
4.1.6	1, 6, 6, 7, 9, 9, 10, 10, 11, 11, 11, 20, 21, 22 ✓ $\frac{10+10}{2}$ ✓ = $\frac{20}{2}$ = 10 ✓✓	Arrange (1) Method (1) Ans. (2)	(4)
4.1.7	$22 - 1$ ✓ = 21 ✓	Method (1) Ans. (1)	(2)
4.1.8	$3 \times 5 = 15$ ✓✓	Ans. (2)	(2)

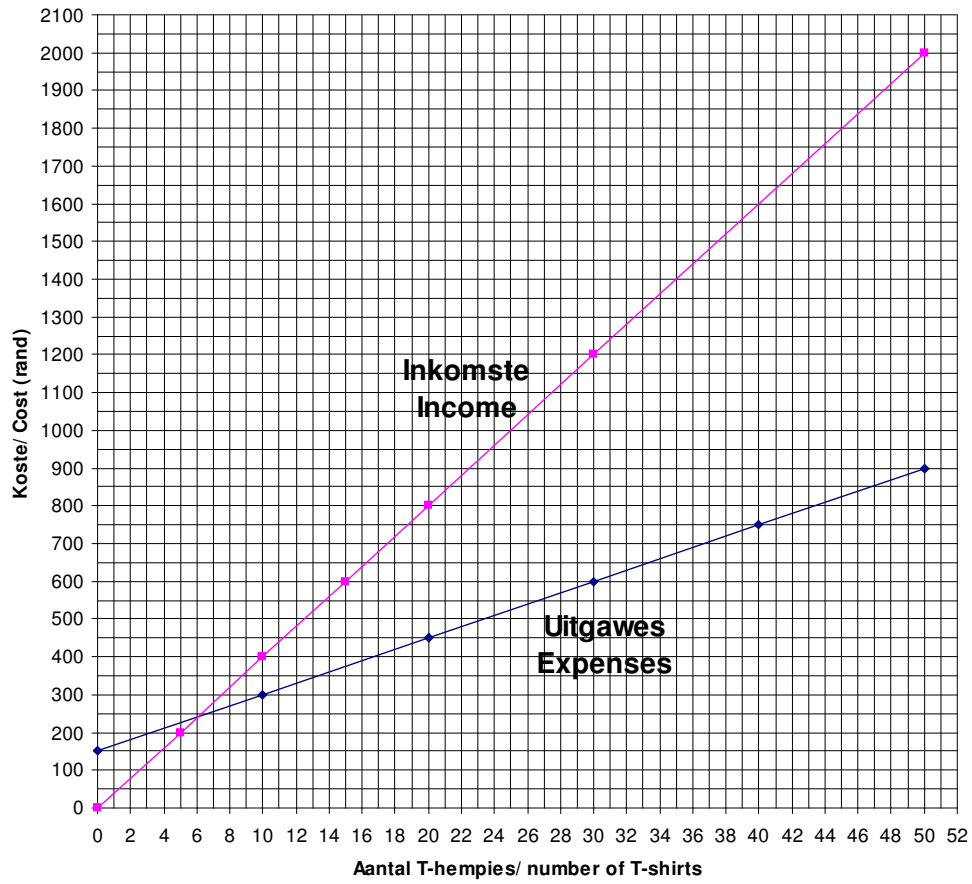
**QUESTION 5 [20]**

5.1			
5.1.1	$1,8 \text{ m}^2 \times 5 \checkmark = 9 \text{ m}^2 \checkmark$	Method (1) Ans. (1)	<b>(2)</b>
5.1.2	Area = length x width $= 10 \times 8 \checkmark$ $= 80 \text{ m}^2 \checkmark \checkmark$	Method (1) Ans. (2)	<b>(3)</b>
5.1.3	Area = $\frac{1}{2}$ base x height $= \frac{1}{2} \cdot 5 \times 3 \checkmark$ $= 7,5 \text{ m}^2 \checkmark \checkmark$	Method (1) Ans. (2)	<b>(3)</b>
5.1.4	Volume = length x width x height $= 3 \times 2 \times 0,5 \checkmark \checkmark$ $= 3 \text{ m}^3 \checkmark$	Method (2) Ans. (1)	<b>(3)</b>
5.1.5	Radius = $1,5 \text{ m} \checkmark$ Circumference = $2\pi r$ $= 2 \times 3,14 \times 1,5 \checkmark$ $= 9,42 \text{ m} \checkmark$ $9,42 \text{ m} - 0,85 \text{ (gate)} \checkmark = 8,57 \text{ m} \checkmark \text{ fence}$	Radius (1)  Method (1) Ans. (1) Method (1) Ans. (1)	<b>(5)</b>
5.1.6	$R55,99 \times 10\text{m} = R559,90 \checkmark + R 149,50 \text{ (gate)} \checkmark$ $= R 709,40 \checkmark \checkmark$	Method (2) Ans. (2)	<b>(4)</b>

**QUESTION 6 [22]**

6.1			
6.1.1	A = 600 ✓✓ B = 40 ✓✓	Ans. (2) Ans. (2)	(4)
6.1.2	U = R150 + 15n ✓✓	Ans. (2)	(2)
6.1.3	See graph : Starts ( 0 ; 150 ) ✓ Any three points marked ✓✓✓ Label (expenses) ✓		(5)

6.2			
6.2.1	C = R600,00 ✓ D = 30 ✓	Ans. (1) Ans. (1)	(2)
6.2.2	See graph : Starts ( 0 ; 0 ) ✓ Any three points marked ✓✓✓ Label (Income) ✓		(5)



6.3			
6.3.1	R900,00 ✓	Ans. (1)	(1)
6.3.2	R2 000,00 ✓	Ans. (1)	(1)
6.3.3	$900 : 2\ 000 = 9 : 20$ ✓	Ans. (1)	(1)
6.3.4	R1 100,00 ✓	Ans. (1)	(1)

**QUESTION 7 [14]**

7.1			
7.1.1	Zimbabwe ✓ or Mozambique	Ans. (1)	<b>(1)</b>
7.1.2	(a) D2 ✓	Ans. (1)	
	(b) A1 ✓	Ans. (1)	<b>(2)</b>
7.1.3	Pafuri, Punda Maria, Shingwedzi, Bateleur, Boulders, Letaba, Oliphants, Timbavati, Satara. Names of any two camps in KNP ✓✓	Ans. (2)	<b>(2)</b>
7.1.4	Northwest ✓	Ans. (1)	<b>(1)</b>

7.2			
7.2.1	10 ✓✓	Ans. (2)	<b>(2)</b>
7.2.2	$\frac{3}{10}$ ✓✓	Ans. (2)	<b>(2)</b>
7.2.3	$\frac{4}{10} = \frac{1}{5}$ ✓✓	Ans. (2)	<b>(2)</b>
7.2.4	0 ✓✓	Ans. (2)	<b>(2)</b>

**QUESTION 8 [12]**

<b>8.1</b>			
8.1.1	21 kg ✓✓	Ans. (2)	<b>(2)</b>
8.1.2	75 <sup>th</sup> percentile ✓✓	Ans. (2)	<b>(2)</b>

<b>8.2</b>			
8.2.1	No ✓	Ans. (1)	<b>(1)</b>
8.2.2	Graph A ✓	Ans. (1)	<b>(1)</b>
8.2.3	$9 - 2$ ✓ = 7 marks ✓	Method (1) Ans. (1)	<b>(2)</b>

<b>8.3</b>			
8.3.1	Graph B ✓ Shows a steady level in unemployment rate. ✓	Ans. (2)	<b>(2)</b>
8.3.2	Graph A ✓ Shows an increase in the unemployment rate. ✓	Ans. (2)	<b>(2)</b>