



Province of the
EASTERN CAPE
EDUCATION

NATIONAL SENIOR CERTIFICATE

GRADE 11

MATHEMATICAL LITERACY – FIRST PAPER

MEMORANDUM

NOVEMBER 2009

MARKS: 100

TIME: 2½ hours

This memorandum consists of 5 pages.

SYMBOL	EXPLANATION
M	Method
MA	Method with Accuracy
CA	Consistent Accuracy
A	Accuracy
C	Conversion
S	Simplification
RT/RG	Reading from a table/graph
F	Choosing the correct formula
SF	Substitution in a formula
O	Opinion
P	Penalty: e.g. for: no units, incorrect rounding off etc.
R	Rounding off

QUESTION 1

- 1.1 $750 \text{ ml} \div 250 \text{ ml} \checkmark$
= 3 cups of flour \checkmark M:1
A:1 (2)
- 1.2 $500 \text{ ml} \div 12,5 \text{ ml} = 40 \text{ units} \checkmark$ of 12,5 ml S:1, A:1
 $40 \times 10 \text{ g} \checkmark = 400 \text{ g}$ of sugar \checkmark M:1, A:1 (4)
- 1.3 20 ml of baking powder $\div 5 \text{ ml} \checkmark$ M:1
4 spoons of baking powder \checkmark A:1 (2)
- 1.4 $\frac{1}{3}$ of 250 ml \checkmark M:1
= 83,33 ml she will measure 80 ml \checkmark A:1 (2)
- 1.5 24 wedges $\times R3 \checkmark$ M:1
= R72,00 \checkmark A:1 (2)
- 1.6 R72 – R25 \checkmark M:1
= R47 profit \checkmark A:1 (2)

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QUESTION 2

- 2.1.1 R300 + R125 + R375 + R2 500 + R500 + R1 125 M:1
+ R750 + R3 325 \checkmark M = R9 000 \checkmark A A:1 (2)
- 2.1.2 $\frac{1\ 125}{9\ 000} \checkmark \times 100\% \checkmark = 12,5\% \checkmark$ S:1, M:1, A:1. (3)
- 2.1.3 R9 000 $\times \frac{4,5}{100} \checkmark = R405 \checkmark$ OR R9 000 + 4,5% M:1, A:1
R9 000 + R405 $\checkmark = R9\ 405 \checkmark$ = R9 405 $\checkmark \checkmark \checkmark$ M:1, A:1 (3)
- 2.1.4 R3 500 $\div 12 \text{ months} \checkmark = R291,67 \checkmark$ M:1, A:1 (2)
- 2.1.5 R125 + R291,67 $\checkmark = R416,67 \checkmark$ M:1, A:1 (2)
- 2.1.6 New Total expense = R8 373,00 \checkmark M:1
 $\frac{2\ 698}{8\ 373} \checkmark \times 360^\circ \checkmark = 116 \checkmark$ S:1, M:1, A:1 (4)
- 2.2.1 12 hours – 7 hours \checkmark M:1
= 5 hours \checkmark A:1 (2)
- 2.2.2 Stopped (for food, petrol, etc.) any good reason \checkmark (1)
- 2.2.3
$$\text{Speed} = \frac{\text{Distance}}{\text{Time}}$$

$$= \frac{(1\ 200-600) \text{ km}}{(12-7) \text{ s hour}} \checkmark \checkmark \checkmark$$

$$= 120 \text{ km/h} \checkmark$$
 Working out distance
Working out time
Substituting even if answer are wrong
Correct answer, even if wrong values were used. (4)

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QUESTION 3

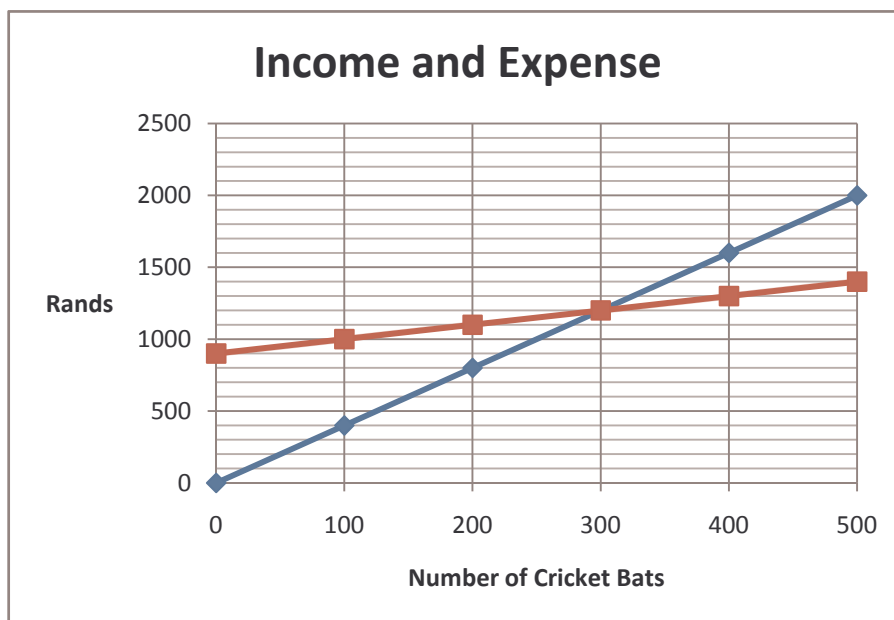
3.1

Number of Cricket Bats (x)	Income (4 x x)	Expense (x + 900)
100	400	1000
200	800	1100
300	1200	1200
400	1600	1300
500	2000	1400

1 Mark for every 2 correct values in the table

(4)

3.2



Income:

Any 2 points plotted correctly ✓

Straight line ✓

Expense:

Any 2 points plotted correctly ✓

Straight line ✓

(4)

3.3

300 Bats ✓✓

(2)

3.4

Income = 4 x 790

= R3 160 ✓

Expense = 790 + R900

= R1 690 ✓

Profit = R3 160 – R1 690

= R1 470 ✓

For:
Income

Expense

Profit

(3)

- 3.5.1 $790 \times \frac{120}{100} \checkmark\checkmark$
 $= 948 \checkmark$ For: 120
M : 1
A : 1 (3)
- 3.5.2 Income = 4×948
 $= R3\,792 \checkmark$ For:
Income
Expense = $948 + R900$
 $= R1\,848 \checkmark$ Expense
Profit = $R3\,792 - R1\,848$
 $= R1\,944 \checkmark$ Profit (3)
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QUESTION 4

- 4.1.1 $A = l \times b$
 $= 9 \text{ m} \times 6 \text{ m} \checkmark$
 $= 54 \text{ m}^2 \checkmark$ SF:1
A:1 (2)
- 4.1.2 Area = 54 m^2
 $30 \text{ cm} = 0,3 \text{ m} \checkmark$
Area of a tile = $0,3 \text{ m} \times 0,3 \text{ m}$
 $= 0,09 \text{ m}^2 \checkmark$ C:1
M:1
No of tiles = $\frac{\text{Area of garage}}{\text{Area of one tile}} = \frac{54}{0,09}$
 $= 600 \text{ tiles} \checkmark$ A:1 (3)
- 4.1.3 $600 \times R1,25 \checkmark$
 $= R750,00 \checkmark$ M:1
A:1 (2)
- 4.1.4 Labour = $54 \text{ m}^2 \times R45 \checkmark$
 $R2430,00 \checkmark$
 $R2430,00 + R750,00 \checkmark$
 $R3180,00 \checkmark$ M:1
A:1
M:1
A:1 (4)
- 4.1.5 $A = P(1+i)^n$
 $= R4\,000(1+0,08)^5 \checkmark\checkmark\checkmark$
 $= R4\,000 \times 1,469328 \checkmark$
 $= R5\,877,31 \checkmark$ SF: 1
SF: 1 SF: 1
S: 1
A: 1 (5)
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QUESTION 5

- 5.1 Easterly direction A : 1 (2)
- 5.2 Riversdale
- 5.3.1 2 Times A : 1 (1)
- 5.3.2 Swellendam A : 1
Mossel Bay A : 1 (2)
- 5.4 $\frac{480}{80}$ ✓ S : 1
= 6 Hrs ✓ A : 1
Total time for breaks = 1h 30 min ✓ A : 1
Total time taken = 7h and 30 min ✓ A : 1
Arrival time at Knysna: 15:30 or 3:30 pm ✓ (5)
- 5.5.1 $\frac{480}{9}$ ✓ M : 1
= 53,33 ℓ ✓ A : 1
= 54 ℓ ✓ *Rounding off* (3)
- 5.5.2 54 x R7,27 ✓ M : 1
= R392,58 ✓ A : 1
= R393 ✓ *Rounding off* (3)
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QUESTION 6

- 6.1 $\frac{5+12+15+19+32+32+40}{7}$ ✓M ✓A Adding
= 23 beaded items per day ✓ CA Dividing
Answer (3)
- 6.2 5; 12; 15;/ 19;/ 32; 32; 46 ✓M Arranging
Median = 19 ✓A numbers
Answer (2)
- 6.3 32 ✓ A Answer (1)
- 6.4 Range = 40 – 5 ✓M Method
= 35 ✓A Answer (2)
- 6.5 Friday✓, Saturday ✓and Sunday✓ A Answer x 3 (3)
- 6.6 More people go out for entertainment on week-ends. Reason
Schools do tours on Fridays and week-ends.
Any suitable reason (1)
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