



Province of the
EASTERN CAPE
EDUCATION

Steve Vukile Tshwete Education Complex • Zone 6 Zwelitsha 5608 • Private Bag X0032 • Bhisho 5605
REPUBLIC OF SOUTH AFRICA

CHIEF DIRECTORATE – CURRICULUM MANAGEMENT

**GRADE 12 LEARNER SUPPORT
PROGRAMME**

**REVISION AND REMEDIAL TEACHING
INSTRUMENT:
ANSWERS**

SUBJECT: MATHEMATICAL LITERACY – FIRST PAPER

June 2009

This document consists of 11 pages.

Strictly not for test/examination purposes

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	1.1.1	$\frac{125}{150} \times 100 \checkmark M$ $= 83,33\% \checkmark A$	Multiplication x 100 Answer	(2)
	1.1.2	$0,375 \div 100 \checkmark M$ $= 37,5\% \checkmark A$	Division Answer	(2)
	1.1.3	$75\% = \frac{75}{100} \checkmark M$ $= \frac{15}{20} \checkmark A$	Method Answer	(2)
	1.1.4	$R150,00 \times \frac{25}{100} \checkmark M$ $= R37,50 + R150,00 \checkmark MA$ $= R187,50 \checkmark A$ <p>OR</p> $R150,00 \times \frac{125}{100} \checkmark \checkmark MM$ $= R187,50 \checkmark A$	Method Addition Answer	(3)
1.2	1.2.1	$12 \times 5 + 4 \times (10 - 4)$ $= 60 + 4 \times 6 \checkmark M$ $= 60 + 24$ $= 84 \checkmark A$	Method Answer	(2)
	1.2.2	$0,65 + 2,94 \div 0,27$ $= 0,65 + 10,88 \checkmark$ $= 11,54 \checkmark$	Method Answer	(2)
	1.2.3	$\frac{46}{100} \times 580 \text{ kg} \checkmark M$ $= 266,80 \text{ kg} \checkmark A$	Method Answer	(2)
1.3	1.3.1	$7 \text{ furlong} = 220 \times 7$ $= 1\,540 \text{ yards} \checkmark A$ $1\,540 \text{ yards} \times 0,9144 \text{ m} \checkmark MA$ $= 1\,408,18 \text{ m} \checkmark CA$	Answer Method Answer	(3)
	1.3.2	$1\,408,18 \text{ m} \div 1\,000 \text{ M} \checkmark$ $= 1,4 \text{ km} \checkmark A$	Division Answer	(2)

1.4.1	$\frac{3}{4}$ ounce = 0,75 ounces $0,75 \times 28,350 \checkmark M$ = 21,26 g of parsley $\checkmark A$	Method Answer	(2)
1.4.2	$1\frac{1}{2} = 1,5$ $1,5 \times 453,6 \text{ g} \checkmark M$ = 680,4 g hake fillets $\checkmark A$	Method Answer	(2)
1.4.3	20 fluid ounces = 0,568 ℓ $1 \text{ fluid ounce} = 0,568 \div 20 \checkmark M$ = 0,0284 ℓ $\checkmark A$ $12 \text{ fluid ounces} = 12 \times 0,0284 \text{ ℓ}$ $\checkmark MA$ = 0,34 ℓ $\checkmark CA$	Division Answer Multiplication Answer	(4) [28]

QUESTION 2

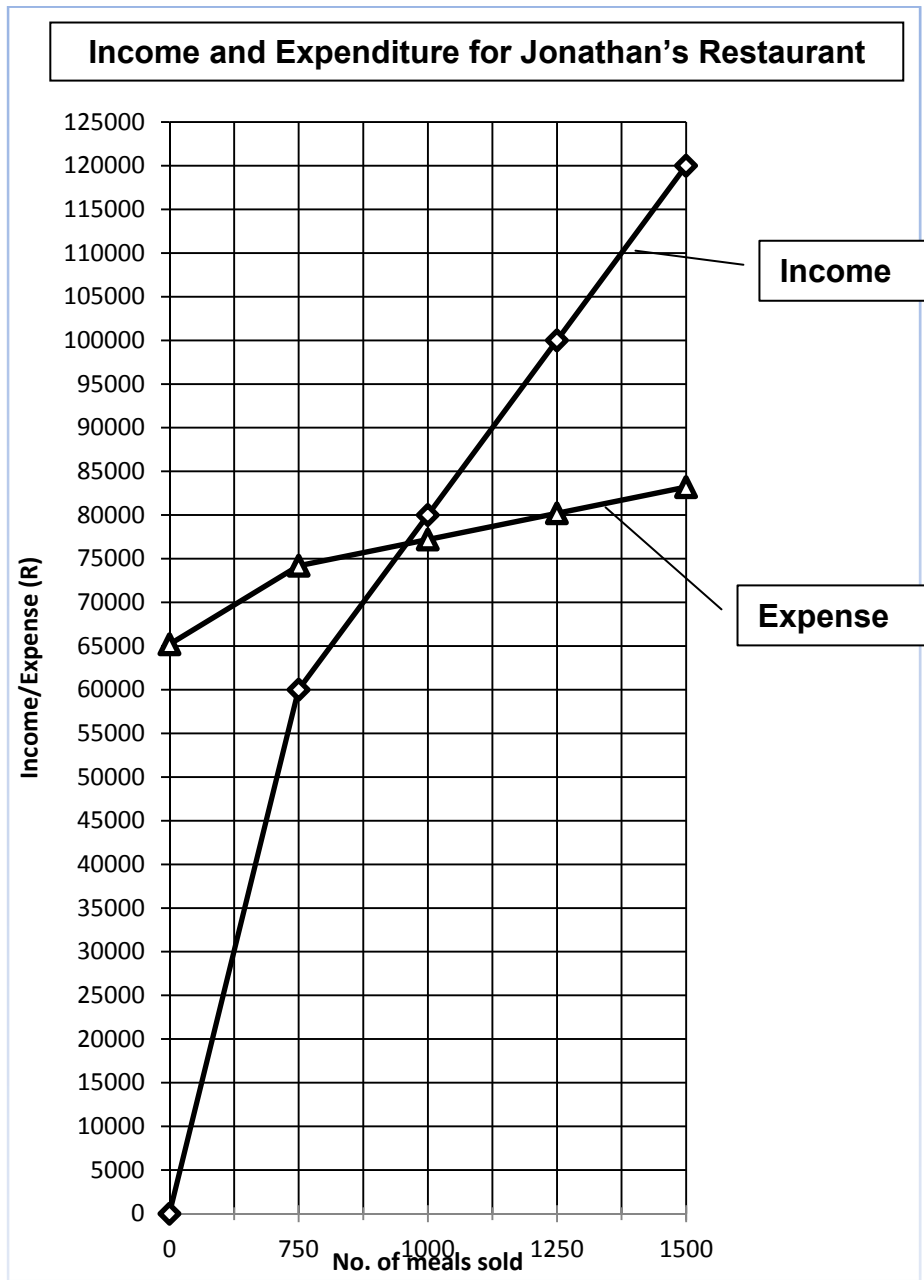
2.1	2.1.1	(a) 60 minutes $\checkmark RG$ (b) 40 minutes $\checkmark RG$	Answer Answer	(1) (1)
	2.1.2	(a) $\frac{10}{20} \checkmark M$ = 0,5 km/minutes $\checkmark A$ = 30 km/h $\checkmark C$ (b) $\frac{15}{20} \checkmark M$ = 0,75 km/minutes $\checkmark A$ = 45 km/h $\checkmark C$	Method Answer Conversion Method Answer Conversion	(3) (3)
	2.1.3	Nxele $\checkmark CA$	Answer	(1)
	2.1.4	8:10 $\checkmark A \checkmark A$	Time; am	(2)
	2.1.5	80 minutes $\checkmark RG$	Answer	(1)
	2.1.6	90 minutes $\checkmark A$	Answer	(1)
	2.1.7	Mabi $\checkmark A$	Answer	(1)
	2.1.8	Mabi $\checkmark A$	Answer	(1)

2.2	2.2.1	(a)	$\frac{54 \times 540\,000}{360}$ OR $\frac{15 \times 540\,000}{100}$	Method	
			✓M = R 81 000 ✓A	Answer	(2)
		(b)	$\frac{90 \times 100}{360}$ OR $\frac{135\,000 \times 100}{540\,000}$ ✓M	Method	
			= 25% ✓A	Answer	(2)
		(c)	$\frac{72 \times 540\,000}{360}$ OR $\frac{20 \times 540\,000}{100}$	Method	
			✓M = R 108 000 ✓A	Answer	(2)
		(d)	$\frac{126 \times 100}{360}$ OR $\frac{189\,000 \times 100}{540\,000}$ ✓M	Method	
			= 35% ✓A	Answer	(2)
		(e)	$\frac{18 \times 540\,000}{360}$ OR $\frac{5 \times 540\,000}{100}$ ✓M	Method	
			= R27 000 ✓A	Answer	(2)
	2.2.2	(a)	R720 000 – R540 000 ✓M = R180 000 ✓A	Subtraction Answer	(2)
		(b)	R720 000 X $\frac{75}{100}$ ✓SF ✓M = R54 000 ✓A Yes ✓O	For 75% Method Answer Conclusion	(4)

QUESTION 3

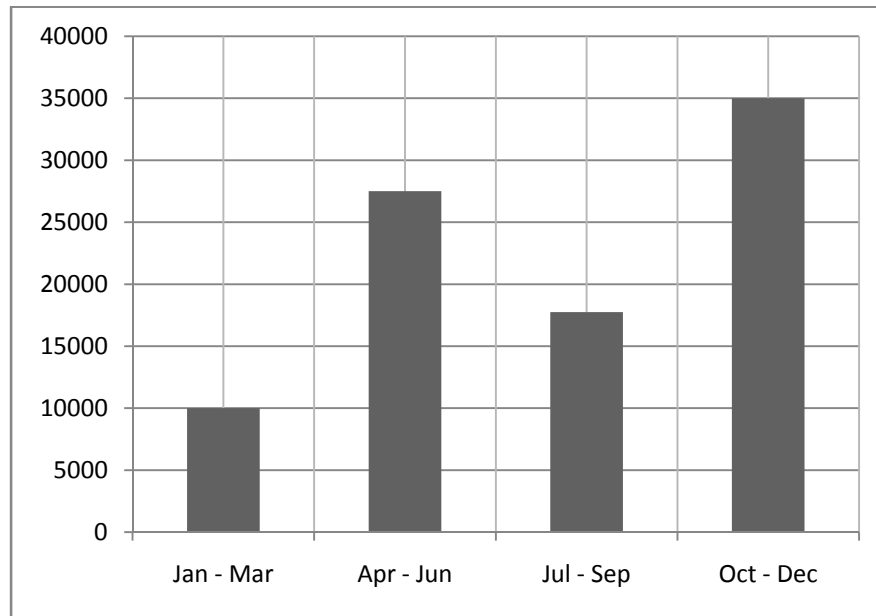
3.1	3.1.1	$R6\ 222,22 \times 9$ staff ✓M $= R55\ 999,98$ ✓A	Method Answer	(2)
	3.1.2	$R1\ 798,00 \div 12$ ✓M $= R149,83$ ✓A	Method Answer	(2)
	3.1.3	$R5\ 000,00 - R149,83$ M✓ $= R4\ 850,17$ ✓A	Method Answer	(2)
	3.1.4	TC = $R65\ 200 + (n \times R12)$ $= R65\ 200 + (915 \times R12)$ ✓SF $= R65\ 200 + R10\ 980$ ✓S $= R76\ 180,00$ ✓A	Substitution Simplification Answer	(3)
	3.1.5	I = $n \times R80$ $= 915 \times R80$ ✓ $= R73\ 200,00$ ✓	Substitution Answer	(2)
	3.1.6	No✓	Answer	(1)

3.1.7



- (a) Plotting any two points correctly ✓A ✓A
Joining with straight line ✓A (3)
- (b) Plotting any two points correctly ✓A ✓A
Joining with straight line ✓A (3)
- (c) 959 ± 10 Customers ✓A (1)

3.2.1



(6)

One mark each bar ✓A ✓A ✓A ✓A
 Labels on the x-axis ✓A
 Bars evenly spaced ✓A

3.2.2 January – March ✓A
 People spent too much over festive season / Back to school costs are very high.
 Any reasonable answer ✓A

(2)

3.2.3 October – December

(1)

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QUESTION 4

- | | | |
|-----|--|--|
| 4.1 | Cost of 5 000 bricks = 5 000 x R2,75
Cost of 15 packets of cement = 15 x R87,50
Cost of 2,5 ton sand = 2,5 x R300,00
Cost of 4 labourers = 4 x R875
Transport
Total cost for building | = R13 750,00 ✓A
= R 1 312,50 ✓A
= R 750,00 ✓A
= R 3 500,00 ✓A
= R 1 500,00 ✓A
= R 20 812,50 ✓CA (6) |
| 4.2 | (a) Area of the rectangle with sides a and b:
= 12 m x 11 m ✓SF
= 132 m ² ✓A

(b) Area of the semi-circle:
= $\frac{1}{2} \times 3,14 \times 5 \times 5$ ✓SF
= 39,25 m ² ✓A

(c) Area of the rectangle with sides c and d:
= 10m x 4m ✓M
= 40 m ² ✓A

(d) Area of the bricked surface:
= 132 m ² – 39,25 m ² – 40 m ² ✓M
= 52,75 m ² ✓A | Substitution

Answer (2)

Substitution

Answer (2)

Method

Answer (2)

Method

Answer (2) |
| 4.3 | Number of litres of varnish
= 52,75 m ² ÷ 2,11 m ² ✓M
= 25 litres ✓A | Method

Answer (2) |
| 4.4 | Cost of varnish = R28,50 x 25 ✓M
= R712,50 ✓A | Method
Answer (2) |
| 4.5 | Amount = P(1 + i x n)
= R20 812,50(1 + $\frac{15}{100} \times 2$) ✓M ✓SF
= R27 056,25 ✓A | For i
Substitution

Answer (3) |

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QUESTION 5

5.1	5.1.1	$140 + 141 + 141 + 145 + 147 + 148 + 153 + 153 + 153 + 158 + 159 + 162 + 162 + 163 + 169 + 170 = 2\,464 \text{ cm} \checkmark M$ $\text{Mean} = \frac{2\,464}{16} \checkmark M$ $= 154 \text{ cm} \checkmark A$	Adding heights Division Answer (3)
	5.1.2	$140; 141; 141; 145; 147; 148; 153; /153; 153; / 158; 159; 162; 162; 162; 169; 170 \checkmark M$ $\text{Median} = 153 \checkmark A$	Sequencing Answer (2)
	5.1.3	153 cm $\checkmark A$	Answer (1)
	5.1.4	$19 + 20 + 21 + 21 + 23 + 23 + 23 + 24 + 25 + 28 + 29 + 33 + 32 + 35 + 38 + 40 = 432 \checkmark M$ $\text{Mean} = \frac{432}{16} \checkmark M$ $= 27 \text{ years} \checkmark A$	Adding ages Dividing by 16 Answer (3)
	5.1.5	$19; 20; 21; 21; 23; 23; 23; / 24; 25; / 28; 29; 31; 32; 35; 38; 40 \checkmark M$ $\text{Median} = \frac{24 + 25}{2} \checkmark M$ $= 24,5 \text{ years} \checkmark A$	Sequencing ages Dividing by 2 Answer (3)
	5.1.6	23 years $\checkmark A$	Answer (1)
5.2	5.2.1	Lesotho $\checkmark RG$	Answer (1)
	5.2.2	Germany $\checkmark RG$	Answer (1)
	5.2.3	Kenya $\checkmark RG$	Answer (1)
	5.2.4	3 countries $\checkmark RG$	Answer (1)
	5.2.5	$2\,100\,000 - 800\,000 \checkmark RG \checkmark RG$ $= 1\,300\,000 \checkmark A$	Graph values Answer (3)
	5.2.6	$800\,000 + 600\,000 + 900\,000 \checkmark RG \checkmark RG$ $\checkmark RG$ $= 2\,300\,000 \checkmark A$	Reading from graph Answer (4)

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QUESTION 6

6.1	Rustenburg ✓RG	Answer	(1)
6.2	N6 ✓RG	Answer	(1)
6.3	Shyam's claim = 594 km x R2,25 ✓M = R1 336,50 ✓A	Multiplication Answer	(2)
6.4	N2 ✓RG	Answer	(1)
6.5	5 ✓RG	Answer	(1)
6.6	(a) Petrol = 1 042 km ÷ 12 km/l ✓M = 86,8 litres ✓A	Division Answer	(2)
	(b) Expense on petrol = R9,17 x 86,8 lit ✓M = R795,96 ✓A	Multiplication Answer	(2)
	(c) R795,96 + R45,40 + R18,00 ✓M = R859,36 ✓A	Method Answer	(2)
	(d) 1 042 x R2,25 = R2 344,50 ✓A He made a gain ✓C Gain = R2 344,50 – R859,36 = R1 485,14 ✓A	Method Conclusion Answer	(3)
6.7	North ✓RM	Answer	(1)
6.8	N10 ✓RM N12 ✓RM Follow the N10✓ route and OR then take the N12✓ to Kimberly	Answer x 2	(2)

[18]**TOTAL: 150**