higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

MATHEMATICAL LITERACY

(First paper)

NQF LEVEL 2

14 February 2025

SYMBOL	EXPLANATION
M	Method
MA	Method with accuracy
CA	Consistent accuracy
A	Accuracy
C	Conversion
S	Simplification
RT/RG/RD/RM	Reading from a table/graph/drawing/document/map
F	Choosing correct formula
SF	Substitution in formula
MF	Manipulation of formula
R/J	Reasoning/Justification
P	Penalty, e.g. for no units, incorrect rounding off, etc.
R	Rounding off
E	Explanation

This marking guideline consists of 7 pages.

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QUESTION 1: (Do not deduct marks if the 'R' sign is omitted. Full marks for the answer only unless stated differently.)

QUESTION		SOLUTION	EXPLANATION	
1.1	1.1.1	40 + 30 ÷ ½ = 40 + 60✓ = 100✓ (1 mark answer only)	1M 1A	(2)
	1.1.2	(22 - 7) – (-5) + 7² = 15 + 5 + 49✓ = 69✓ (1 mark answer only)	1M 1A	(2)
1.2		$\frac{109}{100}$ ✓ × $R22\,900$✓ = $R24\,961$✓ $\quad \frac{9}{100} \times R22\,900 = R2\,061$✓ R22 900 + R2 061✓ = R24 961✓	1M 1A 1R	(3)
1.3	A	$\frac{50}{100}$✓ = $\frac{1}{2}$ ✓	1M 1A	
	B	$\frac{3}{4} \times 100$✓ = 75 %✓ **OR** 0,75 × 100 = 75 %	1M 1A	
	C	$\frac{80}{100}$✓ = 0,8 ✓**OR** $\frac{4}{5}$ = 0,8	1M 1A	(6)
1.4		$\frac{400}{14}$✓ = 28,57✓ ≈ 28 boxes✓	1M 1A 1R	(3)
1.5	1.5.1	14:30	1 A	(1)
	1.5.2	8.30 am to 9.30 am = 1½ hours✓ 11.30 am to 12.30 pm = 1 hour✓ 2.30 pm to 4.30 pm = 2 hours✓ Total study time = 4½ hours✓ Also accept 4,5 hours	3M 1A	(4)
1.6	1.6.1	Sandile : Jimbo 12 : 18✓ 2 : 3 ✓	1A 1S	(2)

1.6.2	Sandile:	$\frac{2}{5} \times R888$✓	$\frac{12}{30} \times R888$✓	1M	
		$= R355{,}20$✓	$= R355{,}20$✓	1A	
			OR		
	Jimbo:	$\frac{3}{5} \times R888$✓	$\frac{18}{30} \times R888$✓	1M	
		$= R532{,}80$✓	$= R532{,}80$✓	1A	(4)

1.7 $\text{Speed} = \frac{\text{distance}}{\text{time}}$

$= \frac{350✓}{4✓} = 87{,}5 \text{ km/h}$✓ 2SF 1A (3)

[30]

QUESTION 2: (Do not deduct marks if units are omitted, unless a mark is awarded for the unit. Full marks for the answer only, unless stated otherwise.)

2.1	2.1.1	Circle	1RD	(1)
	2.1.2	Radius = 3 ÷ 2✓ = 1,5 m✓	1M 1A	
		$A = \pi r^2$ = 3,14 × 1,5²✓ = 7,065 m² rounded to 7,07 m²✓	1SF 1A	(4)
	2.1.3	5 handrails	1RD	(1)
	2.1.4	60 cm ÷ 100✓ = 0,6 m✓	1C 1A	(2)
	2.1.5	1 handrail = 0,6 m + 1,4 m✓ = 2 m✓	1M 1A	
		Therefore: 2 m × 5 handrails✓ × R135 per m✓ = R 1350✓	2M 1A	(5)
2.2	2.2.1	Rectangular prism	1A	(1)
	2.2.2	Volume = length × width × height = 25 cm × 18 cm × 26 cm✓ = 11 700 cm³✓	1SF 1A	
		Therefore: 11 700 cm³ × 3 containers✓ = 35 100 cm³✓	1M 1A	(4)
2.3	2.3.1	North West (also accept NW)✓✓	2RM	(2)
	2.3.2	Springbok	1RM	(1)

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2.3.3	N4	1RM	(1)
2.3.4	George✓ and Knysna✓	2RM	(2)
2.3.5	1✓:5 000 000✓	2RM	(2)
2.3.6	119 mm × 5 000 000✓ = 595 000 000 mm✓	1M 1A	
	595 000 000 mm ÷ 1 000 ÷ 1 000✓ = 595 km✓	1C 1A	(4)
			[30]

QUESTION 3: (Do not deduct marks if the 'R' sign is omitted. Full marks for the answer only unless stated differently.)

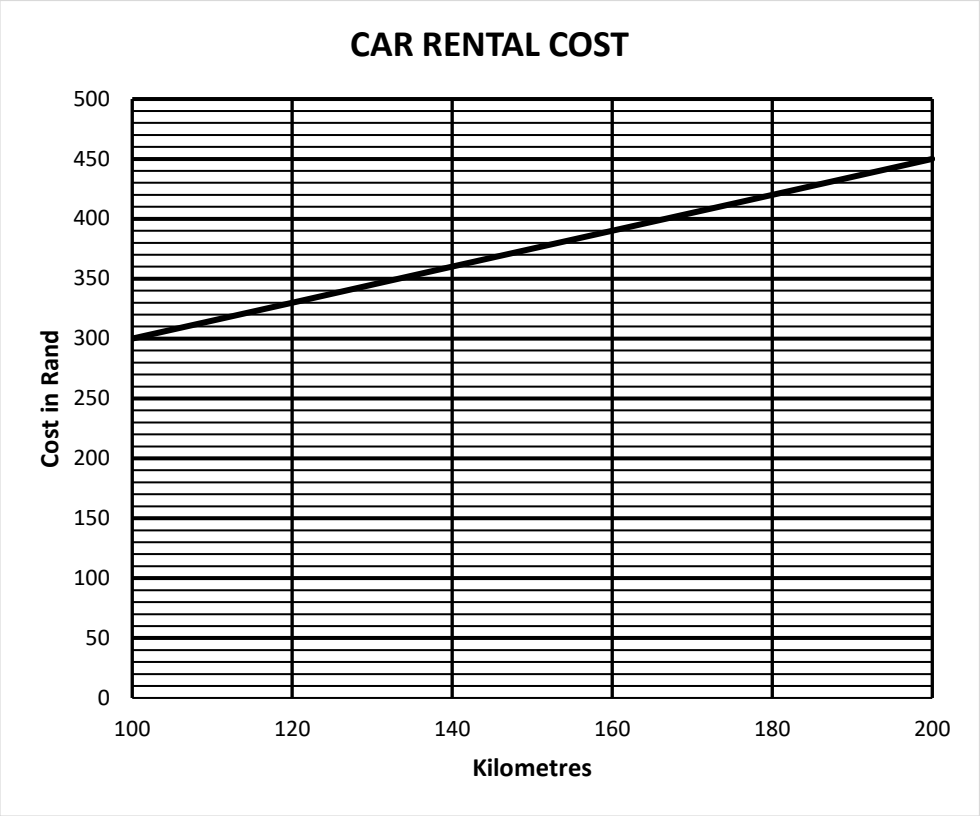
3.1	3.1.1	• Among the many advantages of saving is the long-term security it provides. • To be prepared for unforeseen expenses/circumstances. • Saving money is a step towards financial independence. • Saving money enables one to take calculated risks. • Savings reduce stress. • Compound interest is a benefit of saving. • Accept any other reasonable answers. (TWO answers must be provided) (Any 2 × 1)	2A	(2)
	3.1.2	Expense✓ She will be spending money✓	1A 1E	(2)
	3.1.3	Value added tax✓ VAT has not been added yet✓	1A 1E	(2)
	3.1.4	Option 1: R2 500 Option 2: $\frac{115}{100} \times R2\,250$✓ $= R2\,587{,}50$✓	1M 1A	
		She must choose Option 1 (VAT inclusive)✓ Option 2 is more expensive/Option 1 is cheaper✓	1C 1R/J	(4)
	3.1.5	PayShap = R45✓	1A	
		Draw money at ATM: R2 500 ÷ R100 = 25 R2,40 × 25✓ = R60✓	1M 1A	
		PayShap is cheaper✓	1C	(4)
3.2	3.2.1	Cell C	1RT	(1)
	3.2.2	R1,20✓ ÷ 60✓ = R0,02 or 2 cents per second✓	2M 1A	(3)

	3.2.3	Vodacom: R1,20 × 150 minutes✓ = R180✓	1M 1A	
		Cell C: R0,66 × 150 minutes✓ = R99✓	1M 1A	
		Saving: R180 – R99 = R81✓	1A	(5)
3.3	3.3.1	R941,32	1RT	(1)
	3.3.2	45GHT99	1RT	(1)
	3.3.3	R80,50 + R24,50✓ = R105,00✓	1RT 1A	(2)
	3.3.4	R9 081,06✓ – R6 600✓ = R2 481,06✓	1RT 1M 1A	(3)
				[30]

QUESTION 4: (Do not deduct marks if the 'R' sign is omitted. Full marks for the answer only unless stated differently.)

4.1	4.1.1	A:	R300 + R1,50(60)✓ = R300 + R90 = R390✓	1SF 1A	
		B:	R420 = R300 + 1,50 x✓ R420 – R300 = 1,50 x $x = \frac{120}{1,5} = 80\ km$✓ 100 km + 80 km = 180 km✓	1SF 1A 1CA	(5)
	4.1.2		400 km – 100 free km = 300 km✓ R300 + R1,50(300) ✓ = R300 + R450 = R 750✓	1M 1SF 1A	(3)
	4.1.3		Cost in rand	1A	(1)
	4.1.4		Direct proportion✓ As the kilometres increase,✓ the cost also increases.✓	1A 2R/J	(3)

4.1.5



Heading✓
Label x-axis✓
Label y-axis✓
(100; 300)✓
(200; 450)✓
Straight line/correct shape of graph✓ (6)

4.2	4.2.1	30 days	1RG	(1)
	4.2.2	50 workers	1RG	(1)
	4.2.3	$Days = \frac{900}{90}$✓ $= 10\ days$✓	1SF 1A	(2)
	4.2.4	Indirect/Inverse✓ As the number of workers increases,✓ the number of days decreases.✓	1A 1R/J	(3)
4.3	4.3.1	100;✓ 50;✓ 25✓	3A	(3)
	4.3.2	Geometric/Constant ratio✓ One divides by 2 in each instance✓	1A 1E	(2)
				[30]

QUESTION 5: (Full marks for the answer only unless stated differently.)

5.1 5.1.1 Bar chart/Bar graph 1RG (1)

5.1.2 Interview 1A (1)

5.1.3 $3 + 4 + 2 + 3 + 8 + 10 + 6 + 1 + 7 + 8 + 4 + 7$✓ $= 63$✓ 1M 1A (2)

5.1.4 March✓ and August✓ 2RG (2)

5.1.5 $10 - 1$✓ $= 9$✓ 1RG 1A (2)

5.1.6 $\frac{63✓}{12✓} = 5{,}25$✓ Also accept 5 days 2M 1A (3)

5.2 5.2.1 Fact 1A (1)

5.2.2 24 1RT (1)

5.2.3

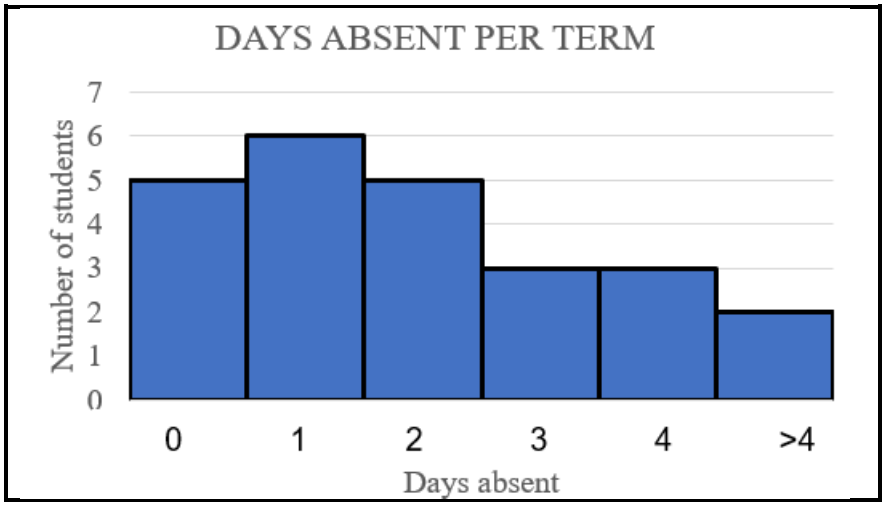
Days absent	Tally	Frequency
0	~~IIII~~	5✓
1	~~IIII~~ I	6✓
2	~~IIII~~	5✓
3	III	3✓
4	III	3✓
>4	II	2✓

6A
The tally and frequency need to be correct for 1 mark (6)

5.2.4 1 day 1RT (1)

5.2.5 $\frac{50✓}{24✓} = 2{,}08$✓ ≈ 2 days✓ 2M 1A 1R (4)

5.2.6



1 mark for each correct bar.

CA from 5.2.3 (6)

[30]

TOTAL: 150

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