higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

MATHEMATICAL LITERACY
NQF LEVEL 4
(Second paper)

17 February 2025

SYMBOL	EXPLANATION
M	Method
MA	Method with accuracy
MCA	Method with consistent accuracy
CA	Consistent accuracy
A	Accuracy
C	Conversion
S	Simplification
RT/RG/RD/RM	Reading from a table/graph/document/map
F	Choosing correct formula
SF	Substitute into formula
R/J	Reasoning/justification
P	Penalty – no units, incorrect rounding off.
R	Rounding off
E	Explanation
U	Unit
AO	Answer only

This marking guideline consists of 10 pages.

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QUESTION 1

1.1 $\frac{1}{5} \times$ R 250 000
$=$ R50 000✓ 1A

QUOTATION WITH VAT INCLUDED
$\frac{15}{100} \times$ R34 700✓ 1M
$=$ R5 205
R34 700 + R5 205✓ 1MCA
$=$ R39 905✓ 1CA

OR
$\frac{115}{100}$✓ $\times$ R34 700✓ 2MCA
$=$ R39 905✓ 1A

Yes✓, she can afford it. 1R/J

(5)

1.2 **YEAR 1**
$\frac{8,2}{100} \times$ R150 000✓ 1M
$=$ R12 300✓ 1A
R150 000 + R12 300
$=$ R162 300✓ 1A

YEAR 2
$\frac{8,2}{100} \times$ R162 300 1A
$=$ R13 308,60✓
R162 300 + R13 308,60
$=$ R175 608,60

TOTAL INTEREST EARNED:
R12 300 + R13 308,60✓ 1MCA
$=$ R25 608,60✓ 1CA
OR
R175 608,60 − R150 000✓ 1MCA
$=$ R25 608,60✓ 1CA

(6)

1.3 1.3.1 R9 720 ÷ R13,50✓ 1M
720✓ cupcakes 1A
720 ÷ 12✓ 1MCA
$=$ 60✓ dozen 1CA

(4)

1.3.2 $\%\ increase = \frac{(16,00-13,50)}{13,50}$✓ $\times$ 100✓ 2M
$=$ 18,52✓% 1A (3)

	1.3.3	**PROJECTED INCOME**		
		840 × R16,00✓	1MA	
		= R13 440✓	1A	
		PROJECTED EXPENDITURE		
		$\frac{5}{100}$ × R6 875,75✓	1M	
		= R343,79✓	1A	
		R6 875,75 + R343,79✓	1M	
		= R7 219,54✓	1A	
		OR		
		105% ✓✓ × R6 875,75✓	2M	
		= R7 219,54✓	1A	
		PROJECTED PROFIT		
		R13 440 − R7 219,54✓	1MCA	
		= R6 220,46✓	1CA	(8)
1.4		**BLOCK 1**		
		600 kWh × 262,84✓c	1MA	
		=157 704 ✓c	1A	
		BLOCK 2		
		50 kWh × 362,72 c		
		=18 136 ✓c	1A	
		TOTAL AMOUNT IN CENTS		
		157 704c +18 136 c		
		=175 840 c✓	1A	
		TOTAL AMOUNT IN RAND		
		175 840 c ÷ 100✓ (CA 175 840)	1C	
		=R1 758,40✓	1CA	(6)
1.5	1.5.1	**ANNUAL SALARY**		
		R41 280,90 ×12 = R495 370,80✓	1A	
		SALARY BRACKET		
		370 501 – 512 800✓	1RT	
		ANNUAL TAX		
		77 362 + 31% × (495 370,80 −370 500)✓	1SF	
		77 362 + $\frac{31}{100}$ × 124 870,80		
		77 362 + 38 709,95✓	1M	
		= R116 071,95✓	1A	
		R116 071,95 − R17 235✓	1M	
		= R98 836,95		
		Yes✓, the amount is correct.	1R/J	(7)
	1.5.2	IRP5 ✓	2A	(1)
				[40]

QUESTION 2

2.1 2.1.1

$AC^2 = AB^2 + BC^2$
$2{,}5^2 = AB^2 + 1{,}5^2$ ✓ 1SF
$2{,}5^2 - 1{,}5^2 = AB^2$ ✓ 1MF
$\sqrt{6{,}25 - 2{,}25} = \sqrt{AB^2}$ ✓ 1M
$\sqrt{4} = \sqrt{AB^2}$
$2\text{ m} = AB$ (3)

2.1.2 **AREA OF RECTANGULAR SECTION**

$A = L \times B$
$A = 6 \times 3$✓ 1SF
$A = 18$✓ m^2 1A

AREA OF TRIANGULAR SECTION

$A = ½ \text{ base} \times h$
$A = ½ \times 1{,}5 \times 2$✓ 1SF
$A = 1{,}5$✓m^2 1A

TOTAL AREA OF DRIVEWAY

$A = 18 + 1{,}5$
$A = 19{,}50\ m^2$
$\therefore Thandi\ is\ correct$ ✓ 1R/J (5)

2.1.3 **NO. OF BRICKS**

$\frac{19{,}50}{0{,}02}$ ✓ 1MA
$= 975$ ✓ 1A

EXTRA FOR CUTTING & WASTAGE

$\frac{5}{100} \times 975$✓ 1M
$= 48{,}75$
≈ 49 ✓pavers 1A

TOTAL NUMBER OF PAVERS

$975 + 49$✓ OR $(975 + 48{,}75 = 1\,023{,}75 \approx 1\,024)$ 1MCA
$= 1\,024$✓ 1CA (6)

2.1.4 **NO. OF PALLETS NEEDED**

$\frac{1\,024}{576}$ ✓ 1M
$= 1{,}78$ CA 2.1.3
≈ 2✓ pallets 1CA

$R950 \times 2$✓ 1MCA
$= R1\,900$

Yes✓, the budget is enough. 1R/J (4)

	2.1.5	30 mm ÷ 1000 ✓ = 0,03✓ m	1C 1A	
		RECTANGULAR SECTION OF DRIVEWAY V = L × B × H V = 6 × 3 × 0,03✓ V = 0,54✓ m^3	 1SF 1A	
		TRIANGULAR SECTION OF DRIVEWAY 0,05 m^3		
		TOTAL VOLUME OF SAND 0,54 + 0,05✓ = 0,59✓ m^3✓	 1MCA 1A;1U	(7)
2.2	2.2.1	North-East✓✓	2A	(2)
	2.2.2	700 km/h = $\frac{1\,842\ km}{Time}$✓ Time = $\frac{1\,842\ km✓}{700{,}38\ km/h}$ ✓ = 2,63✓ hrs 0,63hrs × 60✓ = 37,8 ≈ 38 minutes =2hrs 38 minutes ✓	1SF 1RT 1MF 1A 1C 1A	(6)
	2.2.3	2 cm = 420 km✓ 420 × 100 000✓cm = 42 000 000 cm 2: 42 000 000✓ 1: 21 000 000✓	1scale 1C 1A 1S	(4)
	2.2.4	1 cm = 21 000 000 cm 2,5 × 21 000 000 = x✓ 52 500 000 cm = x✓ $\frac{52\,500\,000}{100\,000} = x$✓ 525 km✓ = x	CA2.2.3 1MCA 1CA 1C 1CA	(4) **[41]**

QUESTION 3

3.1	3.1.1	Constant difference✓ pattern A constant value of R16 000✓ is added each time to determine the next term in the sequence. ✓	1A 2R/J	(3)
	3.1.2	A = R62 500✓	1A	(1)
		B = 200✓	1A	(1)
		C = 32 000✓	1A	(1)
	3.1.3	Cost ✓ = R2 500 +✓(number of people (n) × R375) ✓	3F	(3)
	3.1.4	Cost ✓ = R400 × number of people (n) ✓	2F	(2)
	3.1.5	**COMPANY A** R2 500 +✓(100 × R375)✓ R2 500 + R37 500 = R40 000✓ **COMPANY B** 100 × R400✓ = R40 000✓ Company B✓ No booking fee to be paid in advance✓. Any reasonable justification based on the company selected.	2M 1A 1M 1A 1A 1R/J	(7)
	3.1.6	**COMPANY B** **COST BEFORE DISCOUNT** 300 × R400✓ = R120 000✓ **TOTAL DISCOUNT** $\frac{10}{100}$ × R120 000✓ = R12 000✓ **TOTAL COST AFTER DISCOUNT** R120 000 − R12 000✓ = R108 000✓ **OR**	 1M 1A 1M 1A 1MCA 1CA	

TOTAL DISCOUNT

$\frac{10}{100} \times$ R400✓ 1M
= R40✓ 1A
R40 × 300✓ 1M
= R12 000✓ 1A

TOTAL COST AFTER DISCOUNT

R120 000 − R12 000✓ 1MCA
= R108 000✓ 1CA

OR

COST BEFORE DISCOUNT

= 300 × R400✓ 1M
= R120 000✓ 1A

TOTAL COST AFTER DISCOUNT

$\frac{90}{100} \times$ R400✓
= R360✓ 1M
R360 × 300✓ 1A
= R108 000✓ 1M
1A

TOTAL DISCOUNT

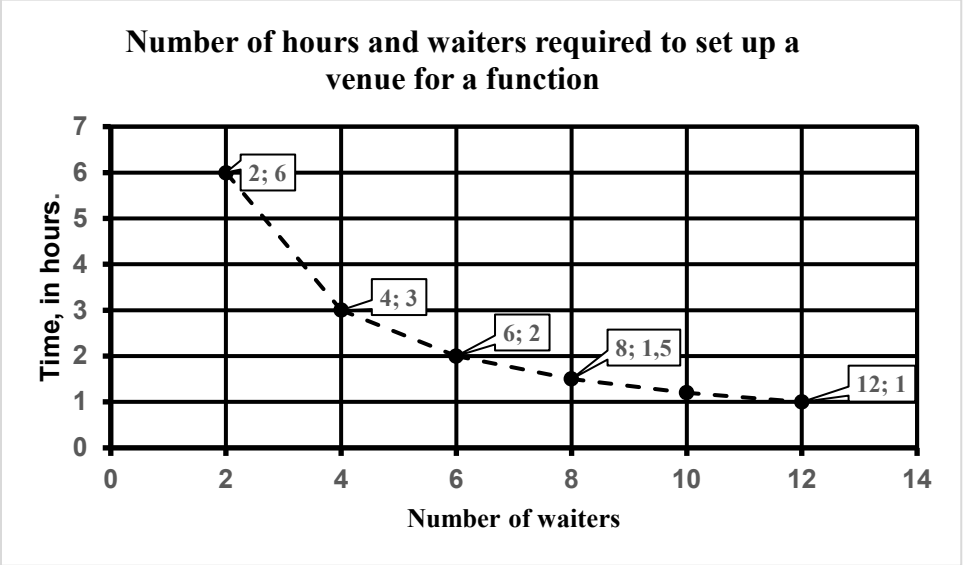
R120 000 − R108 000✓
= R12 000✓ 1MCA
1CA

(6)

3.2 3.2.1 Time✓ 1A
The more waiters, the less time to set up the venue. ✓ 1R/J

(2)

3.2.2

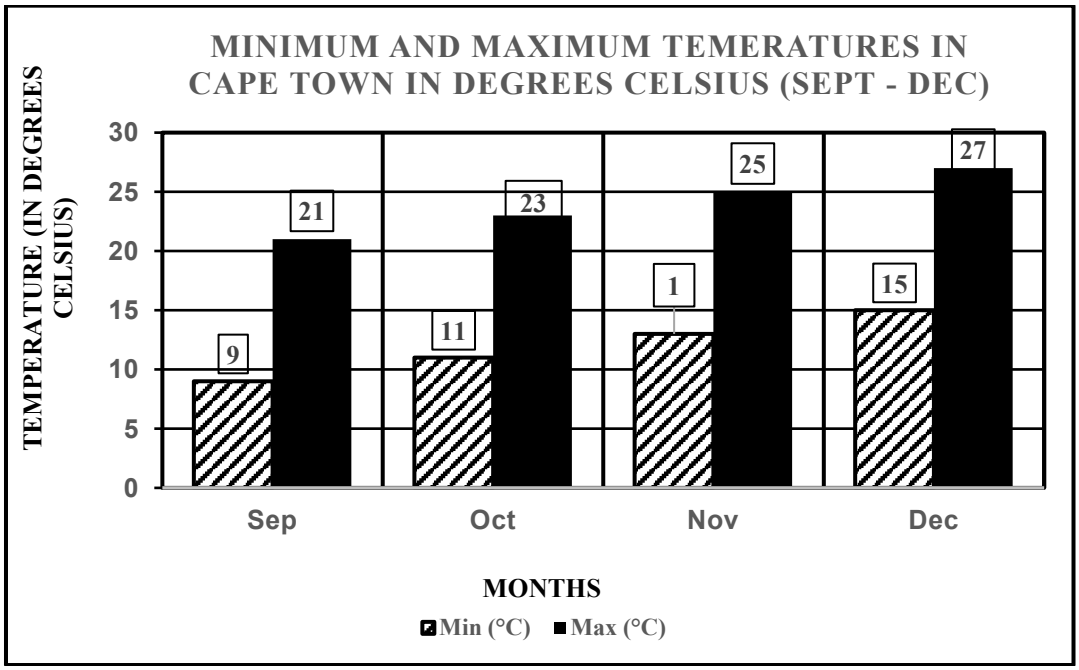


Label x – axis: Number of waiters✓
Label y – axis: Time✓in hours.
Start point (2; 6) ✓ End point (12; 1) ✓ Any other 2 correct points✓✓
Correct curve✓
Suitable heading✓ (8)
[34]

QUESTION 4

4.1	4.1.1	12✓	1A	(1)
	4.1.2	January ✓ February✓	2RT	(2)
	4.1.3	$17 - 7$✓	1MA	
			1A	
		$= 10$✓℃		(2)
	4.1.4	19✓℃	1RT	(1)
	4.1.5	**MEAN: MINIMUM TEMPERATURES**		
		$\frac{141✓}{12✓}$	2M	
		$= 11{,}75$ ✓ ℃	1A	
		MEAN: MAXIMUM TEMPERATURES		
		$\frac{283}{12}$ ✓	1M	
		$= 23{,}58$ ✓ ℃	1A	(5)
	4.1.6	Mean✓	1A	
		All the data points are used in the calculation.✓	1R/J	(2)
	4.1.7	Increasing✓✓	2A	(2)

4.1.8



Category label on x – axis✓; Label on y – axis✓
1 mark per correct bar set (1 × 4)✓✓✓✓ Legend✓;Suitable heading✓ (8)

4.2 4.2.1 42 263 + 22 675 + 32 336 + 5 488 + 4 844 + 6 087 + 11 992 + 4 895 + 4 899 + 11 545 + 45 921✓ 1MA
= 192 945✓ 1A
AO (2)

4.2.2 **UK**
$\frac{42\ 263}{192\ 945}$✓ × 100✓ **(CA 4.2.1)** 2MCA
= 21,90✓% 1CA
USA
$\frac{22\ 675}{192\ 945}$ × 100 **(CA 4.2.1)**
= 11,75✓% 1CA

DIFFERENCE
21,90 − 11,75
= 10,15✓% 1CA
OR
42 263 − 22 675✓ 1M
= 19 588✓ 1A
$\frac{19\ 588}{192\ 945}$✓ × 100✓ 2MCA
= 10,15✓% 1CA (5)

4.2.3 Tourism boosts our economy✓✓ 2A
(Accept any relevant answer) (2)

4.2.4 P (French tourists)
$= \frac{11\,545\checkmark}{192\,945} \times 100\checkmark$
$= 5{,}98\checkmark\%$

CA4.2.1
1RT;1MCA
1CA
(3)
[35]

TOTAL: 150

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