NATIONAL SENIOR CERTIFICATE EXAMINATION
MAY 2021

MATHEMATICAL LITERACY: PAPER II

MARKING GUIDELINES

Time: 3 hours Marks: 150

These marking guidelines are prepared for use by examiners and sub-examiners, all of whom are required to attend a standardisation meeting to ensure that the guidelines are consistently interpreted and applied in the marking of candidates' scripts.

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QUESTION 1

1.1 1.1.1 $6 \times 12 = 72$ inches
$72 + 5{,}5 = 77{,}5$ inches
$77{,}5 \times 2{,}54 = 196{,}85$ cm

1.1.2 1,8 cm : 196,85 cm
1 cm : 109,36 cm
1 : 109

1.1.3 $4 \text{ cm} \times 109 = 436 \text{ cm} = 4{,}4 \text{ m}$

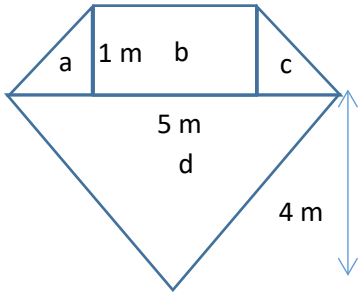
1.2 $\frac{1}{4} \times 100 = 25\%$

1.3 1.3.1 $\text{Area}_{a+c} = \frac{1}{2} \times 1 \times 1 \times 2 = 1 \text{ m}^2$

$\text{Area}_b = 3 \times 1 = 3 \text{ m}^2$

$\text{Area}_d = \frac{1}{2} \times 5 \times 4 = 10 \text{ m}^2$

Total area = 14 m^2



OR

Area of trap = ½ (3 + 5) × 1
= 4 × 1
= 4 m^2
Area of triangle = ½ × 5 × 4
= 10 m^2
Total area = 4 + 10 = 14 m^2

1.3.2 $14 \times 100^2 = 140\,000 \text{ cm}^2$

$\frac{x}{5} = \frac{140000}{300000}$

$x = 2{,}\dot{3} \approx 3$ litres

OR

300 000 cm^2 ÷ (100)^2
= 30 cm^2
14 ÷ 30 × 5
= 2,3 litres
≈ 3 litres

1.3.3 $4 \times \frac{20}{1000} = 0{,}08 \text{ m}^3$

0,08 × 1 000 = 80 litres

$^1/_{10} \times 80 = 8$ litres

8 × 1 000 = 8 000 mℓ of hardener
He is correct

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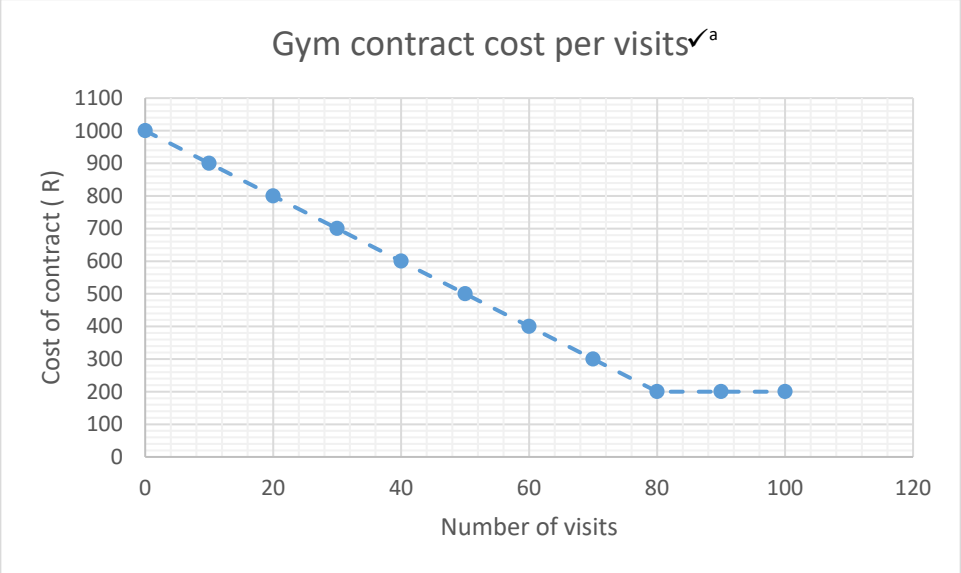
1.4 1.4.1 $1\,000 - 800 = 200$

$$\frac{800}{100} = 8 \text{ months}$$

$8 \times 10 = 80$ visits

1.4.2 $\frac{80}{25} = 3{,}2 \approx 4$ months, therefore, February

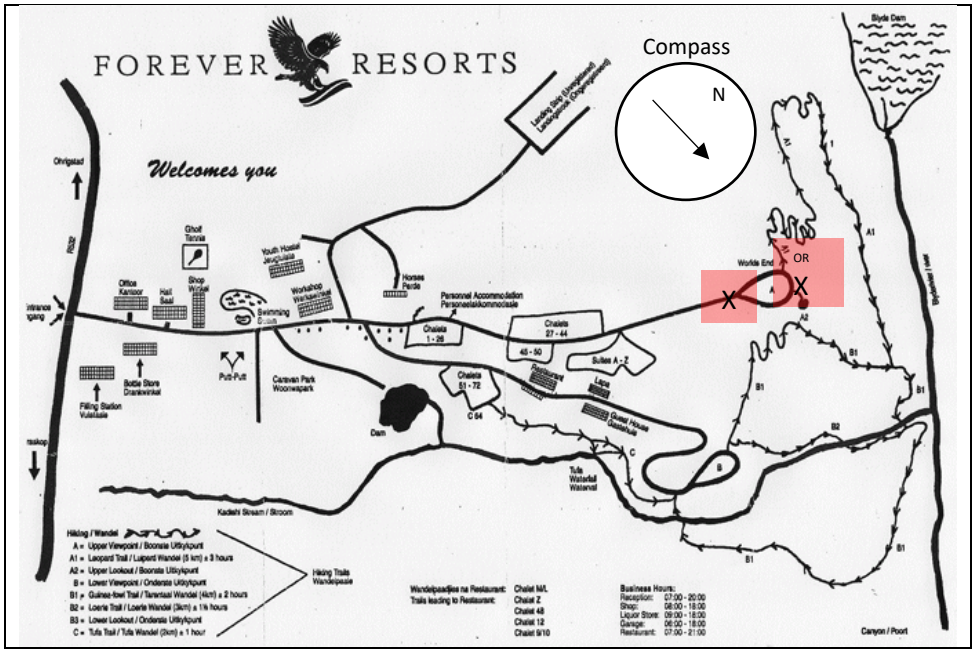
1.4.3



QUESTION 2

2.1 2.1.1

2.1.2



2.1.3 Lower Viewpoint OR B

2.2 2.2.1 The speed at which they are hiking changes – ground is steeper thus slowing them down. OR But they walk further in the second hour so it could be that they are hungry so walk faster or the trail gets easier.

2.2.2 $s = \frac{d}{t} = \frac{3}{1{,}25} = 2{,}4\ \text{km/h}$

2.2.3 $2{,}4 \times \frac{1000}{3600} = 0{,}66 \approx 0{,}7\ \text{m/s}$

OR

2 400 m : 3 600 sec

0,7m : 1 sec

2.3 2.3.1 $3\,432 \times \frac{7}{6} = \text{R}4\,004$ per person for the duration of the stay

OR

R3 432 ÷ 6

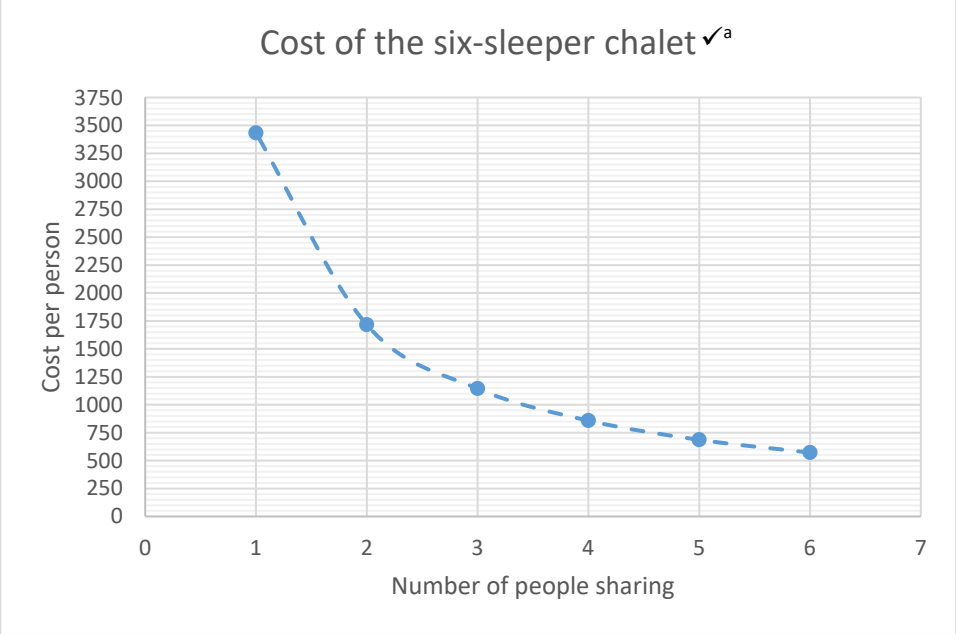
= R572 × 7

= R4 004

2.3.2

Number of people staying in the chalet	1	2	3	4	5	6
Cost of the chalet per night (R)	3 432	1716	1144	858	686,40	572

2.3.3



[31]

QUESTION 3

3.1 3.1.1 Industry that increased: Finance
Industry that decreased: Manufacturing
Percentage that they both changed by: 9%

3.1.2 20 + 17 + 15 + 13 + 10 + 8 + 6 + 4 + 4 + 2 = 99
Should be 100%

3.2 3.2.1 Oct – Dec.

3.2.2 Trade changed from 15 to 17
Transport and communication from 10 to 11
Electricity from 4 to 3
Agriculture from 2 to 1
There is no utilities or changed to electricity
Transport heading changed to transport and communication
Personal changed to personal services
(any 3)

3.2.3 Bobby should have × 360 and ÷ 100 and he rounded his answer off incorrectly.
$\frac{17 \times 360}{100} = 61,2°$

3.3 3.3.1 18 men = 18% therefore each man represents 1%
1% of 490 146 = 4 901,46 ≈ 4901

3.3.2 $\frac{41-37}{37} \times 100 = 10,81\%$

3.4 3.4.1 7 is the maximum value and is an outlier
OR
It is much higher than the rest of the data

3.4.2 7 – 0 = 7

3.4.3 The IQR of B is 2 and C is 3 thus showing that the middle set of the data is further spread out in department C

3.4.4 The minimum value and the lower quartile are the same number
That means that the bottom 25% of the employees all have no children

3.4.5 3

3.4.6 $\frac{6}{20} = \frac{3}{10}$ OR 0,3

3.4.7 $\frac{3}{10} \times \frac{1}{3} = \frac{1}{10}$ OR 0,1 OR $\frac{6}{20} \times \frac{1}{3} = \frac{1}{10}$

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QUESTION 4

4.1 4.1.1 Basic salary: 8 hrs × 4 weeks × 5 days × R180 = R28 800

Overtime: 2 days × 6 hrs × (R180 × 1,5) = R3 240

Total: R28 800 + R3 240 = R 32 040

4.1.2 R 32 040 × 12 = R 384 040

4.1.3 63 853 + 31% (384 480 – 305 850) = R88 228,30
88 228,30 – (13 635 + 7 479) = R67 114,30

4.1.4 32 040 – (67 114,30 ÷ 12) = 26 447,14

OR

(R384 480 – R67 114,30) ÷ 12
= R317 365,70 ÷ 12
= R26 447,14

4.2 4.2.1 30 ÷ 12 = 2,5 years

4.2.2 No. They have excluded the initial deposit of R439

8 850 + 439 = R9 289

4.2.3 $\frac{8850-4399}{4399} \times 100 = 101{,}18\%$

Total: 150 marks

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