education

Department:
Education
North West Provincial Government
REPUBLIC OF SOUTH AFRICA

PROVINCIAL ASSESSMENT

GRADE 10

MATHEMATICAL LITERACY P2
NOVEMBER 2024

MARKS: 75

TIME: 1 ½ hour

This question paper consists of 7 pages.

INSTRUCTIONS AND INFORMATION

1. This question paper consists of FOUR questions. Answer ALL the questions.
2. Start EACH question on a NEW page.
3. Leave a line after each sub question.
4. Number the answers correctly according to the numbering system used in this question paper.
5. You may use an approved calculator (non-programmable and non-graphical), unless stated otherwise.
6. Show ALL calculations clearly.
7. Round off ALL final answers appropriately according to the given context, unless stated otherwise.
8. Indicate units of measurement, where applicable.
9. Diagrams are NOT necessarily drawn to scale, unless stated otherwise.
10. Write neatly and legibly.

QUESTION 1

1.1 TABLE 1 below shows a list of concepts and units/symbols thereof.

TABLE 1: CONCEPTS AND UNITS/SYMBOLS

Column A		Column B	
1.1.1	Capacity	A	℃
1.1.2	Area	B	millimetres
1.1.3	Height	C	millilitres
1.1.4	Temperature	D	m^2
		E	kg

Use TABLE 1 above to choose the unit/symbol from COLUMN B that matches the concept in COLUMN A. Write only the letter (A–E) next to the question numbers (1.1.1 to 1.1.4), e.g. 1.1.5 F. (8)

1.2 Dan wants to watch a movie. The movie starts at 21:00 and is **1 hour 45 minutes** long.

1.2.1 Write 21:00 in a 12 hour format. (2)

1.2.2 What time will the movie end? (2)

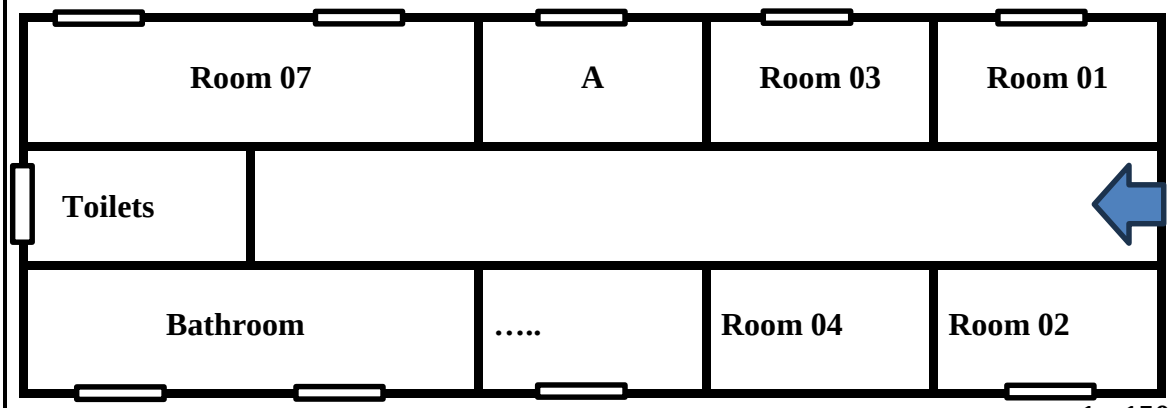
1.3 Connie weighs 94 kg and is concerned about her weight. She has joined a gym and wants to lose some weight. Convert her weight to grams. (2)

[14]

QUESTION 2

2.1 Morare secondary is a boarding school. The school hostel has 12 identical blocks labelled **A** to **L**. Each room has 3 beds except room 07 which has 4 beds.

Below is a layout Block A of Morare secondary school hostel.



Refer to the layout above to answer the questions that follow.

2.1.1 Write down the number of the room labelled **A.** (2)

2.1.2 Kitso is staying at **B07**. Explain what **B07** mean in this context. (2)

2.1.3 Write a set of directions to walk from room 04 to room 07. (3)

2.1.4 The hostel matron states that the total number of learners in the hostel if ALL the rooms are fully occupied is 192.

Verify, showing ALL calculations whether her statement is CORRECT. (4)

2.1.5 Explain the meaning of the scale 1 **:** 150. (2)

2.1.6 The actual width of bedroom 07 is 3,6 m. Use the given scale to calculate the bedroom width on the layout in mm. (4)

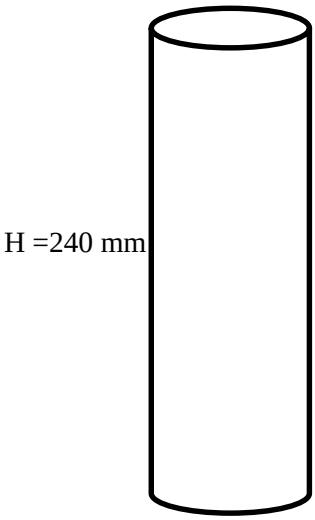
2.2 The hostel caretaker found a library card at the hostel gate.

What is the probability as a percentage, that it belongs to a learner in Block A? Round off your answer to the nearest percentage. (4)
[21]

QUESTION 3

Connie found a healthy smoothie recipe on the internet. She must blend a medium sized banana, apple, a handful blueberries and $1\frac{2}{3}$ cup of milk. The mixture yields 550 ml of smoothie.

Below is a bottle she uses to drink her smoothie.

Picture of a bottle	Diagram (without the lid)
	

1 cup = 200 ml **1 000 m*l* = 1 000 cm^3**

Use the information above to answer the questions that follow.

3.1 Determine the amount of milk needed in ml, if *1 cup = 200 ml.* (2)

3.2 Determine the number of bananas needed to make 1 500 ml of smoothie. (3)

3.3 Convert 240 mm to cm. (2)

3.4 Hence determine the volume of this bottle in cm$^{3.}$

You may use the formula:

$\boldsymbol{v = \pi r^2 h}$, where $\pi = 3{,}142$. (4)

3.5 Connie claims that one bottle is big enough to hold TWICE the mixture.

Verify, showing ALL calculations whether her claim is VALID. (5)

3.6 The material used to make this bottle costs R0,20/ cm^2.

Determine the cost of making 1 water bottle.

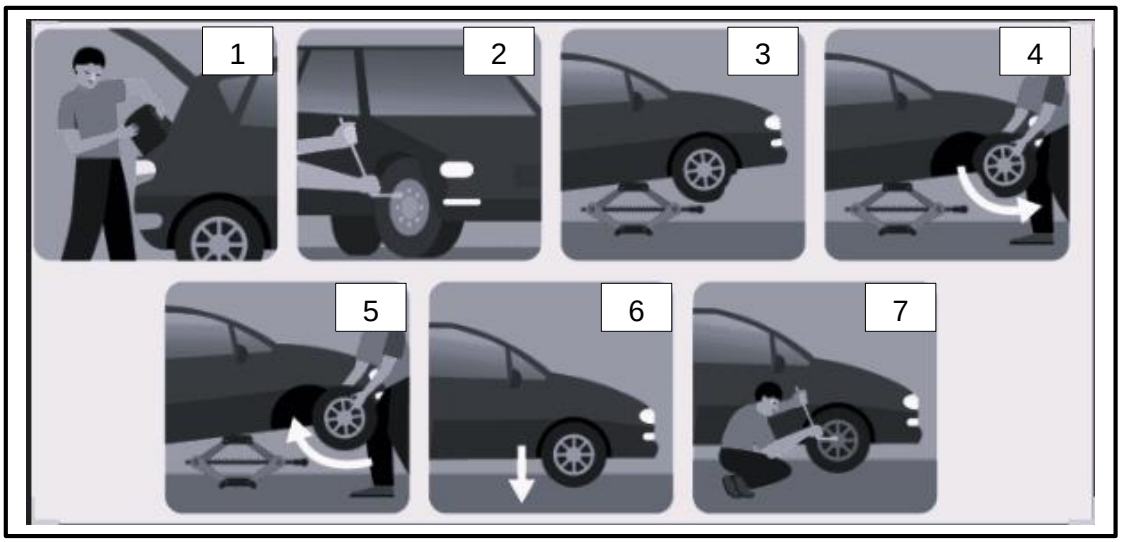
You may use the formula:

$\boldsymbol{SA = \pi \times r(r + 2 \times h)}$, where $\pi = 3{,}142$. (5)

[21]

QUESTION 4

4.1 The diagram below shows steps on how to change a car's flat tire.



Use the diagram above and answer the questions that follow.

4.1.1 Name the tool needed to lift the car. (2)

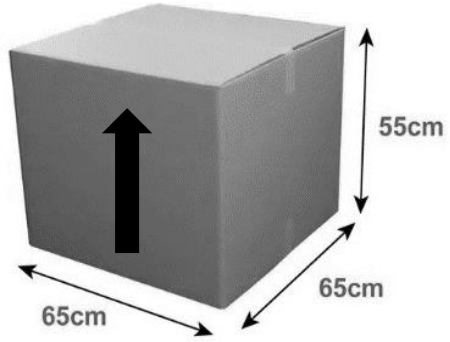
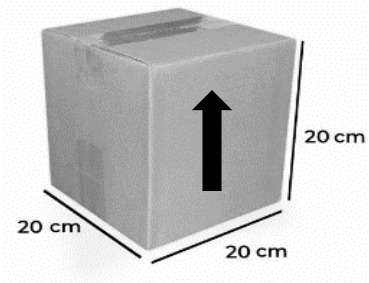
4.1.2 Write step by step instruction from STEP 2 to STEP 5. (4)

4.1.3 Which step indicates that the car must be lowered down? (2)

4.1.4 It is recommended that the process of changing a tire must be performed on a flat surface. Give a reason for this recommendation. (2)

4.2 Connie makes glass bowls and sell them local stores. She packs ONE bowl in a small box with the dimensions (20 cm × 20 cm × 20 cm). During distribution to local stores, she packs the small boxes in a bigger one (65 cm × 65 cm × 55 cm).

The diagram below shows the dimensions of each box.

Big box	Small box
	

Use the diagram and information above and answer the questions that follow.

4.2.1 Give a reason why there are arrows on these boxes. (2)

4.2.2 Connie claims that she can pack more than 18 small boxes in a big one.

Verify, showing ALL calculations, whether her claim is VALID. (7)
[19]

TOTAL 75