



Education and Sport Development

Department of Education and Sport Development
Departement van Onderwys en Sport Ontwikkeling
Lefapha la Thuto le Tihabololo ya Metshameko

NORTH WEST PROVINCE

**NATIONAL
SENIOR CERTIFICATE**

GRADE 10

MATHEMATICAL LITERACY P1

JUNE 2019

MARKS: 50

TIME: 1hour

This question paper consists of 7 pages including an annexure

INSTRUCTIONS AND INFORMATION

1. This question paper consists of FIVE questions. Answer ALL the questions.
2. Use ANNEXURE to answer QUESTION 5
3. Number the answers correctly according to the numbering system used in the question paper.
4. You may use an approved calculator (non- programmable and non- graphical) unless stated otherwise.
5. Show ALL the calculations clearly.
6. Round off ALL final answers appropriately according to the given context, unless stated otherwise.
7. Units of measurement MUST be indicated, where applicable.
8. Diagrams are NOT necessarily drawn to scale, unless stated otherwise.
9. Write neatly and legibly.

QUESTION 1

- 1.1 Rekopantswe secondary school has 1280 learners and 40 teachers. Write the ratio of learners to teachers in a simplified form. (2)
- 1.2 In 2016, Statistics South Africa reported that there were 17 003 467 secondary school students in the country. Write down the number of students in words. (2)
- 1.3 Mary has R1 450. She gave $\frac{3}{5}$ of her money to her son. Calculate (in rands) the money she gave to her son. (2)
- 1.4 Mary needs 45 tiles to tile her kitchen. If each box has 12 tiles, how many boxes should she buy? (3)
- [9]**

QUESTION 2

Mavis is a third year college student. She receives R3 800 from her parents as a monthly allowance. She is also working at the supermarket on weekends and receives a monthly salary of R1 800. TABLE 1 below shows Mavis budget.

TABLE 1: MAVIS BUDGET

INCOME		EXPENDITURE	
Allowance	R3 800	Rent	R1500
Salary	R1 800	Food	R1 700
		Clothes	R300
		Entertainment	R250
		Others	R700
Total			R4 450

Use the table to answer the questions that follow.

- 2.1 How much does Mavis spend for entertainment? (2)
- 2.2 Identify Mavis fixed expense. (2)
- 2.3 Calculate her total monthly income. (2)
- 2.4 Calculate the rent as a percentage of the total expenditure. (2)
- [8]**

QUESTION 3

Lebogang is staying in EThekweni Municipality. Table 2 below shows the consumption of electricity and the cost of different appliance used by Lebogang during November 2015

TABLE 2: COST OF ELECTRIC APPLIANCE

Appliance	Electrical rating in Watts	Hours used per day	Days used per month	kWh Used per month	Monthly Cost at 131,46 Cents/kWh (incl VAT at 14%)
Cellphone Charger	28	10	14	1,96	R2,58
Clothes iron	1 500	4	6	36	R47,33
Kettle	2 000	0,5	30	30	R39,44
Light	100	5	30	15	R19,72
Refrigerator (With freezer)	400	6,5	30	78	R102,54
Hotplate: 2 plate	1 500	3	30	A	R177,48
Television	80	6	30	14,4	R18,93
TOTAL				310,36	R 408,02

[Adapted from www.durban.gov.za]

- 3.1 Determine an electric appliance that was used on daily basis with higher electrical rating? (2)
- 3.2 How many kilowatts hour (kWh) were used for the refrigerator? (2)
- 3.3 Calculate the missing value of **A**. (3)
- 3.4 Calculate the total monthly cost excluding VAT. (2)
- 3.5 Show how the monthly cost of R18,93 of a television was calculated.

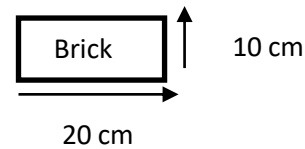
You may use the following formula

$$\text{Monthly cost of TV} = \text{Watts} \times \text{number of hours} \times \text{number of days} \times \text{cents /kWh}(3)$$

[12]

QUESTION 4

Tshepo would like to start a vegetable garden as shown below. He intends to pave the path using rectangular paving bricks. The length of the paving path is 8 m and the breadth is 1,5 m. The dimension of one brick is given below.



[Adapted from [http/ www.pinterest.com](http://www.pinterest.com)]

Use the information above to answer the questions that follow.

4.1 Calculate the area of the paving path.

You may use the following formula:

$$\text{Area} = \text{length} \times \text{width} \quad (2)$$

4.2 Calculate (in m^2) the area of one paving brick.

You may use the following formula:

$$\text{Area} = \text{length} \times \text{width} \quad (4)$$

4.3 How many paving bricks does he need to pave the path? (2)

4.4 Tshepo intends to make a circular plot opposite to his vegetable garden in which he will plant a tree. The diameter of the circular plot is 1,5 m. Calculate the area of the circular plot.

You may use the following formula:

$$\text{Area of a circle} = \pi r^2, \text{ and using } \pi = 3,142 \quad (3)$$

[11]

QUESTION 5

ANNEXURE shows a seating plan of FC Stadium.
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Use ANNEXURE to answer questions that follow

- 5.1 How many gates does the stadium have? (2)
- 5.2 Which gate is closest to family area? (2)
- 5.3 Harry has a ticket in block Y23 and Jerry has a ticket in block B14. Determine the shortest route from Block B14 to block Y23. (2)
- 5.4 If the dimensions of the field in the map is $7 \text{ cm} \times 4,5 \text{ cm}$, calculate the actual length of the field in the map. The scale of the field in the map is 1:2000 (4)

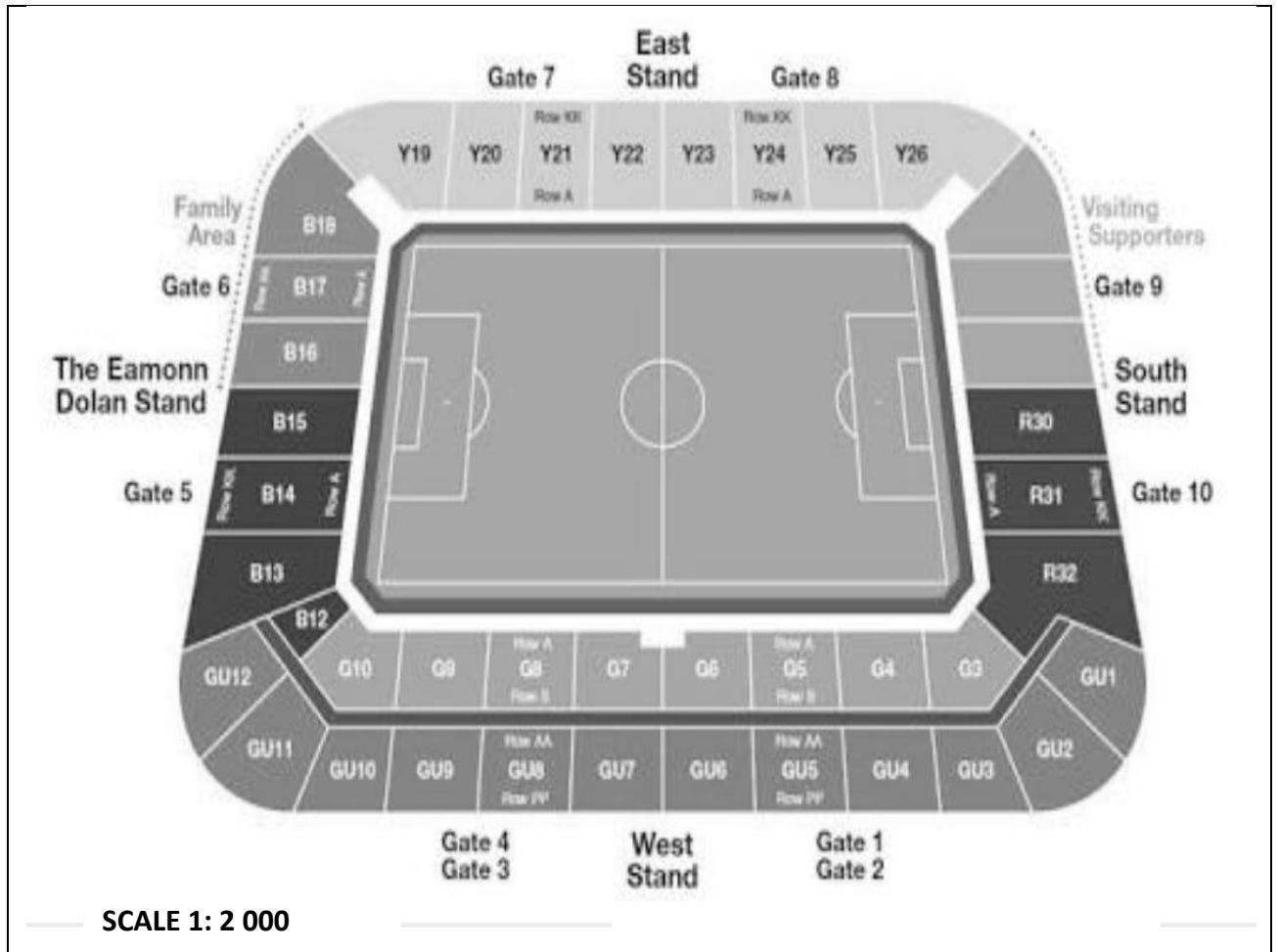
[10]

TOTAL: 50

ANNEXURE

QUESTION 5

SEATING PLAN OF FC STADIUM



[Adapted from [http:// footballtripper.com](http://footballtripper.com)]