CANDIDATE NAME

## CENTRE NUMBER

$\square$ CANDIDATE NUMBER $\square$

MATHEMATICS
212/02
Paper 2
October/November 2023
2 hours
Candidates answer on the Question Paper
Additional Materials: Tracing paper
Geometrical instruments

## READ THESE INSTRUCTIONS FIRST

Write your candidate name, centre number and candidate number on the spaces provided.

Write in dark blue or black pen in the spaces provided on the Question Paper.

You may use an HB pencil for any diagrams or graphs.
Do not use staples, tables, paper clips, highlighters, glue or correction fluid.

Answer all questions in this paper.
All working should be clearly shown below each question.
Marks will be given for working which shows that you know how to solve the problem even if you get the wrong answer.

The number of marks is given in brackets [ ] at the end of each question or part question.

Electronic calculators should not be used.
The total number of marks for this paper is 100 .

| Examiner's <br> Use |  |
| :---: | :--- |
| 1 |  |
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| Total |  |

1 (a) Write the following numbers in numeral form:
(i) $8000+500+3$
$\qquad$
(ii) Three and one - quarter

Answer (a)(ii)
(b) Round off the following numbers as indicated.
(i) 1360 to the nearest Hundred

Answer (b)(i)
(ii) 75.249 to the nearest whole number

Answer (b)(ii)
(c) The product of two numbers is 63 .

If one of the numbers is 9 , work out the other number.

Answer (c)

2 State whether the following statements are Incomplete, Complete, True or False.
(a) $9 \%$ as a common fraction is equal to $\frac{9}{10}$.
$\qquad$
(b) In the number 705.49 the value of 7 is 700 .

Answer (b)
(c) Trial and Check is an example of a problem solving strategy.

Answer (c)
(d) In a kite, two pairs of sides are equal and parallel.

Answer (d)
(e) In a reflection, the size of the object and the image are different.

Answer (e)

3 Work out the following:
(a) $78125-9631$
$\qquad$
(b) $8 \times \frac{1}{4}$
$\qquad$
(c) $68.7 \div 100$

4 (a) Grace bought 4 tyres and a battery for her car.
She paid E610 for the battery.
In total she paid E2 270 for all the items.
(i) Calculate the cost of the 4 tyres.

Answer (a)(i)
(ii) Work out the cost of each tyre.

Answer (a)(ii)
(b) Complete the mapping diagram.


5 Answer this question on the apace provided below.
(a) Draw line $P Q=7 \mathrm{~cm}$.

Point $P$ has been marked for you.
(b) Using a protractor and a ruler, construct angle $P Q R=75^{\circ}$ such that $Q R=6 \mathrm{~cm}$.
(c) Join $P$ and $R$ to form triangle $P Q R$.
(d) Measure the length of $P R$.
Answer (d) ............................................. [1]
(e) What type of triangle is $P Q R$ ?
Answer (e)

6 Figure 6.1 shows a polygon $A B C D E F$ with 6 sides.


Fig. 6.1
(a) Name the polygon $A B C D E F$.

Answer (a)
(b) Name any right angle in the polygon $A B C D E F$.

Answer (b)
(c) Name any two sides parallel to each other in the polygon $A B C D E F$.
Answer (c)
(d) Calculate the area of the polygon.
$\qquad$ square units [2]

7 Peter has 3.4 litres of juice in a jar.
Later he adds $\frac{3}{4}$ litres of juice.
(a) Change $\frac{3}{4}$ to a decimal fraction.

Answer (a)
(b) Work out the total amount of juice Peter has after adding the $\frac{3}{4}$ litres.

8 (a) Calculate $2 \frac{3}{4} \times \frac{1}{6}$.
(b) Asivunisane Cooperatives produced 2820 litres of liquid soap. The cooperative packs the soap into 15 litres buckets.

Calculate the number of buckets they get.

Answer (b)
(c) A house plan has the scale $\mathbf{1} \mathbf{c m}$ represents $\mathbf{5 0} \mathbf{~ c m}$.

Calculate the actual length of a veranda that is 8 cm on the plan in metres.

Answer (c)
metres

9 A pattern is formed by circles as shown in the table.

| Position | $1^{\text {st }}$ | $2^{\text {nd }}$ | $3^{\text {rd }}$ | $4^{\text {th }}$ |
| :--- | :--- | :--- | :--- | :--- |
| Diagram | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc \bigcirc \bigcirc$ |
| Number of <br> circles | 2 | 4 | 6 | $\bigcirc$ |

(a) Complete the pattern and state the number of circles for the $4^{\text {th }}$ position.
(b) Which position will have 14 circles?

Answer (b)
[2]
(c) Calculate the number of circles in the $20^{\text {th }}$ position.

Answer(c)

10 (a) Anzi collects water from the village tape.
The tape releases 4 litres of water every 12 minutes when fully opened.
How many minutes will it take Anzi to collect 120 litres of water?

## Answer(a)

(b) Change 420 minutes to hours.

Answer (b)

11 Busiswa bakes cakes for a living.
She sells each cake for E40.
(a) Work out the income she gets from selling 200 cakes.

Answer (a)
[2]
(b) It costs Busiswa E5 000 to bake 200 cakes.
(i) Calculate the profit she makes from selling the 200 cakes.

Answer (b)(i)
(ii) Work out her percentage profit from selling the 200 cakes.

Answer (b)(ii)

12 Mrs Mvubu bought 914257 grams of sugar at a factory store.
She bought another 956743 grams of sugar at a wholesale.
(a) In which place did Mrs Mvubu buy less sugar?

Answer (a)
(b) Calculate the total mass of sugar Mrs Mvubu bought in kilograms.

Answer (b)

13 There were four media of learning during the covid-19 national lockdown.
There was Radio, Television, WhatsApp and Newspaper.
The table shows the media of learning preferred by learners in a certain class.

| Media of learning | Number of learners |
| :--- | :---: |
| Radio | 20 |
| Television | 10 |
| WhatsApp | 15 |
| Newspaper | 5 |

(a) State the number of learners who preferred WhatsApp in the class.

Answer (a)
(b) Work out the total number of learners in the class.

Answer (b)
(c) Which media of learning was preferred by one-fifth $\left(\frac{1}{5}\right)$ of learners in the class?

Answer (c)
(d) Calculate the sector angle for the learners who preferred Newspaper in the class?

## Answer (d)

(e) Five of the learners who preferred Television were asked to state the amount of time they spent watching television.
Their times were recorded in hours as follows:
$1,1,4,5,3$
State the median time for these learners.

14 From the list of numbers
$1,2,3,4,6,8,9,10,12$.
(a) Write all the multiples of 4 .

Answer (a)
[2]
(b) State the Lowest Common Multiple (LCM) of 4 and 6.

Answer (b)
(c) Write all the even numbers greater than 7 .

15 Figure 15.1 shows a rectangular plot.
The width of the plot is 56 m .


Fig 15.1
The length of the plot is 23 m more than its width.
(a) Calculate the length of the plot.

## Answer (a)

(b) Work out the total distance around the plot.

16 Figure 16.1 shows a coordinate diagram.


Fig. 16.1
(a) Plot the points $A(1,1) ; B(1,3)$ and $C(4,1)$ on the coordinate diagram.
(b) Join the points in the given order to form triangle $A B C$.
(c) Describe the movement from triangle $A B C$ onto triangle $A_{1} B_{1} C_{l}$.

Answer (c) $\qquad$

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