CANDIDATE
NAME
CENTRE NUMBER

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CANDIDATE NUMBER


## MATHEMATICS

212/02
Paper 2
October/November 2021
2 hours
Candidates answer on the Question Paper
Additional Materials: Tracing paper
Geometrical instruments

## READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all work you hand in.
Write in dark blue or black pen.
Answer all questions in this paper.
You may use an HB pencil for any diagrams or graphs.
Do not use staples, paperclips, highlighters, and glue or correction fluid.
All working must be shown clearly.
Scientific calculators should not be used.
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.
The total of the marks for this paper is 100.

| Examiner's |  |
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| Use |  |
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This document consists of $\mathbf{1 8}$ printed pages and $\mathbf{2}$ blank pages.

1 (a) Calculate the difference between 99213 and 8547.

> Answer (a)
(b) Work out $0.6+0.85$.

Answer (b)
(c) Fig. 1.1 shows a factor pair diagram of the number 28.


Fig. 1.1
Find the number represented by the letter $\mathbf{m}$.

Answer (c)

2 Mrs Mlotjwa has 45 ares of land.
Mrs Zulu has $780 \mathrm{~m}^{2}$ more land than Mrs Mlotjwa.
(a) Change 45 ares into $\mathrm{m}^{2}$.

Answer (a)
(b) How much land does Mrs Zulu have?

> Answer (b)
$3 \quad$ (a) Multiply $8243 \times 75$

Answer (a)
(b) Write the missing number in the pattern.
$1,3,6,10, \ldots, 21$

Answer (b)

4 (a) To find the output in the table below, multiply the input by 3 , then subtract 1 .

Complete the table using this rule.

| Input | Output |
| :---: | :---: |
| 4 |  |
| 7 |  |

(b) Calculate 40 metres as a fraction of 1kilometre in its simplest form.
$5 \quad$ Fig 5.1 shows the line segment $E F$.
(a) Bisect the line segment $E F$.
(b) Mark point $G$ where the bisector meets the line segment $E F$.
(c) Mark $H$ on the bisector such that $G H=4 \mathrm{~cm}$ above the line segment.
(d) Draw angle $G F I=90^{\circ}$ such that $F I=4 \mathrm{~cm}$ above the line segment.
(e) Join $H$ to $I$ forming quadrilateral $F G H I$.
(f) Name quadrilateral $F G H I$.
$\qquad$
$E \quad$ Fig. 5.1
F

6 (a) Shade $\frac{2}{3}$ of this diagram.

(b) In October Futhi had E12 584 in her bank account.

In November she deposited E670.
In December she withdrew E9 200.
Her bank does not charge withdrawal fees.

Work out the amount left in her bank account.

Answer:

7 Martha sells chickens to her village and supermarket for a living.
She sold a certain number of chickens to the supermarket.
She sold 8520 chickens in her village.
In total she sold 19284 chickens in her village and supermarket.
Work out the number of chickens she sold to the supermarket.

## Answer

8 A group of learners in a class measured and recorded their masses as follows:
$45.1 \mathrm{~kg}, 45.2 \mathrm{~kg}, 45.7 \mathrm{~kg}, 45.1 \mathrm{~kg}, 45.5 \mathrm{~kg}$
(a) Arrange the masses in order of size starting with the smallest.

Answer (a)
(b) Find the median of their masses.

Answer (b)

9 Table 9.1 shows a timetable for a bus travelling from town A to town E.

Table 9.1

|  | Station |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | Town A | Town B | Town C | Town D | Town E |
| Arrive | 0520 h | 0655 h | 0740 h | 0810 h | 0930 h |
| Depart | 0530 h | 0700 h | 0745 h | 0815 h |  |

(a) At what time does the bus leave Town A?
Answer (a)
(b) At what time does the bus arrive at Town E?

Answer (b)
(c) How long does the bus travel from Town A to Town E?

Answer (c).
(d) The distance from Town A to Town E is 80 km .

Calculate the rate at which the bus was traveling per hour.
(e) Calculate the total time the bus stopped in town A, town B and town C.

Answer (e) minutes [2]

10 Fig. 10.1 shows the diagram of an incomplete tessellation.


Fig. 10.1

Complete the tessellation with 4 or more tiles

11 Tema recorded the number of vehicles that visited her school on a certain day.

She showed the information on the pie chart below

(a) Which type of vehicle mostly visited the school?

> Answer (a)
(b) Write the fraction, in its simplest form, of Isuzu vehicles that visited the school.

Answer (b)
(c) Calculate the percentage of Toyota vehicles that visited the school.
(d) There were 40 vehicles that visited the school.

Calculate the number of Mazda vehicles that visited the school.
Answer (d)

12 A road construction company bought 4500 bags of cement.
Each bag of cement had a mass 50 kg .
(a) Calculate the total mass of all the bags of cement.

Answer (a)
(b) The company transported the bags using Lorries that carry up to 6 tonnes.

Calculate the smallest number of Lorries the company used to transport all the bags.

Answer (b)

13 Fig. 13.1 shows a diagram of an angle.


Fig. 13.1
(a) Write the letter of the vertex of the angle.

Answer (a)
(b) Measure the size of the marked angle.

Answer (b)

14 (a) Divide $4 \div \frac{1}{8}$

Answer (a)
(b) Themba bought $4 \frac{2}{3}$ metres of cloth.

He used $\frac{4}{5}$ metres of the cloth to make a shirt.
Work out the amount of cloth that remains.

15 Sakhu listed the expenses for his wedding as shown in the table below.

| Expense | Cost (E) |
| :--- | :---: |
| Decorations | 7500 |
| Catering | 23870 |
| Venue | 1200 |
| Transport | 5218 |
| Wedding rings | 14750 |
| Tent | 620 |

(a) Round off the cost of the wedding rings to the nearest E1 000.

Answer (a) E.
(b) How much more is the cost of catering than the cost of transport?

Answer (b) E.
(c) Which item cost about half the cost of the venue?

Answer (c)
[1]
(d) For catering Sakhu bought 125 kg of beef.

He paid E94 per kilogram for the beef.
Calculate the total amount he paid for the beef.

16 A doctor advised Futhi to feed her daughter 1800 millilitres of milk each day for 5 days.

Futhi feeds her child using 300 millilitres feeding bottle.
(a) Calculate the number of feeding bottles she need to feed her child each day.

Answer (a)
(b) Work out the amount of milk Futhi needed to feed her child for the 5 days in litres.

Answer (b)

17 Fig. 17. 1 shows a coordinate diagram with the line $X Y$ and polygon $M$ drawn on it.


Fig. 17.1
(a) How many sides does polygon $M$ have?
(b) Reflect polygon $M$ on the line $X Y$.

Label the image $N$.
(c) Plot the points $(12,2),(16,2),(16,4),(14,4),(14,6)$, and $(12,8)$ on the coordinate diagram.

Join the points in the given order to form a polygon $P$.
(d) Slide polygon $M$, 1 left 4 up.

Label the image $Q$.

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