CANDIDATE NAME	

CENTRE NUMBER					CANDIDATE NUMBER				

MATHEMATICS **212/02**

Paper 2 **November 2022**

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 in 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 of the marks for this paper is 100.

Examiner's Use	
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Total	

This document consists of **19** printed pages and **1** blank page.

[Turn over

1 Write the following numbers in numeral form.

(a) Two-fifths.

Answer (a) …………………………… [1]

(b) Forty-seven hundredths

Answer (b) …………………………… [1]

(c) Zero point nine one

Answer (d) ……………………….. [1]

(d) Eight and a half

Answer (e) ………………………… [1]

2   Complete each of the following statements using the words in the box;

vertical	**less**	**obtuse**
180°	**reflex**	**90°**
	horizontal	

(a)   An acute angle is …………….…………….. than a right angle.   [1]

(b)   When reading or plotting points on a grid, the first number is always

   from the ………………………..line.   [1]

(c)   Perpendicular lines always make an angle of …………………..….……[1]

(d)   A half turn clockwise is equal to…………………………   [1]

(e)   One of the angles in a triangle cannot be a …………..……… angle. [1]

3 Work out:

(a) Divide 8 960 ÷ 16

Answer (a) ………………………………… [3]

(b) Add $\frac{1}{4}+\frac{2}{3}$

Answer (b)……………………………….. [3]

(c) Multiply $10\times\frac{3}{5}$

Answer (c) ………………………………….. [2]

4   In January Masakhisane Block yard produced 9 145 bricks**.**
In February the block yard produced 10 100 bricks.

(a)   Calculate the increase in the number of bricks produced by the block yard in February.

Answer (a) ……………………………… [3]

(b)   In January the block yard sold each brick at E12.

Work out the total income from selling all the bricks in January.

Answer (b)…..………………..……… [3]

(c)   In February the block yard increased the price of each brick from E12 by E3.

Calculate the percentage increase in the price of each brick in February.

Answer (c) ……………………………… [3]

5   Figure 5.1 shows a line segment.

(a)   On the line segment, mark *S* such that *RS* = 7 cm.   [2]

(b)   Using *R* as a centre, draw an arc that is 6 cm from *R* above the line
segment.   [1]

(c)   Using *S* as a centre, draw an arc that is 5 cm from *S* above the line
segment.   [1]

(d)   Mark *T*, the point where the two arcs meet.   [1]

(e)   Join *R* to *T* and *S* to *T* forming triangle *RST*.   [1]

(f)   Measure the size of angle *RTS*.

Answer (f) …………….…………… [1]

(g)   What is the type of triangle is *RST*.

Answer (g) ……………………………… [1]

R   **Fig. 5.1**

6 **(a)** Calculate

Years	Months
13	8
− 7	11

Answer (a) ……………………………… [2]

(b) During one Sunday Church service, a pastor took 1 hour 7 minutes preaching.
She finished at 12.05 pm.
Find the time at which the pastor started preaching.

Answer (b)..……………………………… [3]

7 Anele has 127 cows.
Senzo has 78 more cows than Anele.

Calculate the total number of cows Anele and Senzo have altogether.

Answer ………………………………… [4]

8   Mary joined a book reading challenge for a week.

She recorded the number of pages she read each day in a table as follows:

Day	Monday	Tuesday	Wednesday	Thursday
Number of pages	7	22	37	…

She continued reading her book in the pattern shown in the table.

(a)   Calculate the number of pages she read on Thursday.

Answer (a) ……………………………… [2]

(b)   Find the day in which she read 82 pages.

Answer (b) ……………………………… [2]

(c)   State the rule for calculating the number of pages she reads the next day.

Answer (c) ……………………………… [1]

9 The bar chart shows the method used by learners in a class to prevent the spread of Covid-19 virus.

Method used by learners to prevent Covid-19 virus infection
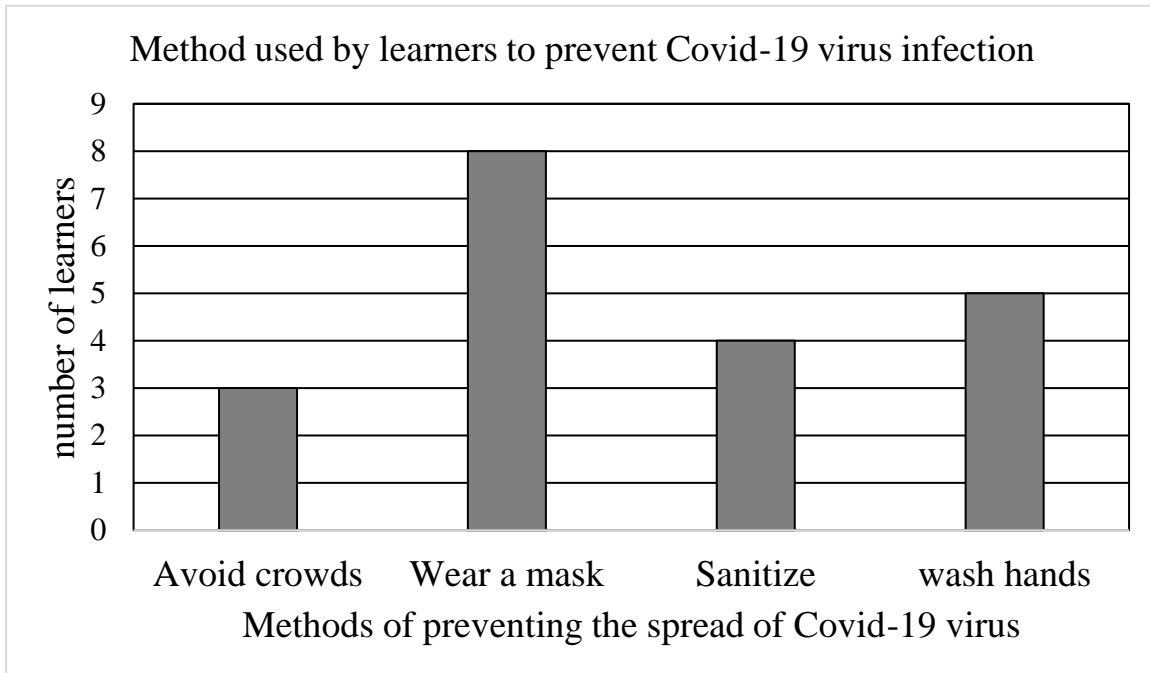
(a) Which method is liked by most learners?

Answer (a) ……………………………… [1]

(b) Calculate the total number of learners in the class.

Answer (b) ……………………………… [2]

(c) Find the fraction of learners who liked washing their hands.

Answer (c) ……………………………… [1]

(d) How many more learners liked washing their hands than those who avoided crowds?

Answer (d) ……………………………… [2]

(e) If this information was shown in a pie chart, work out the sector angle for the learners who liked to sanitize.

Answer (e) ……………………………… [3]

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10 Calculate the number of nines in 110.

Answer ……………………………… [3]

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11 Figure 11.1 shows a quadrilateral with an unknown angle marked *m*.

NOT TO SCALE
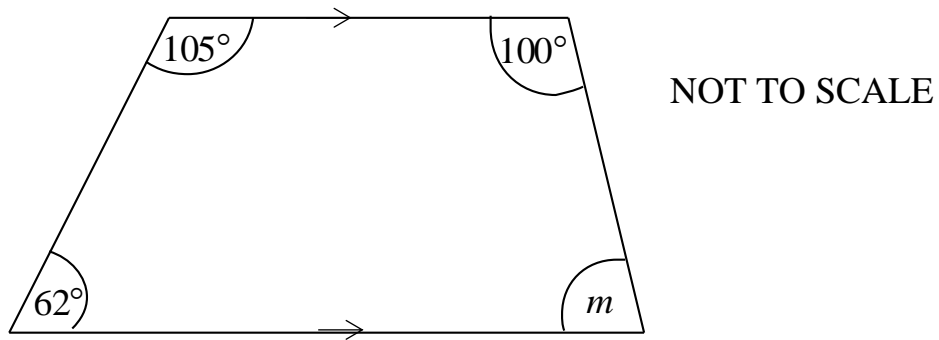
Fig. 11.1

(a) Name the quadrilateral

Answer (a) ……………………………… [1]

(b) Calculate the size of the unknown angle *m*.

Answer (b) ……………………………… [3]

12 The total population of a certain village is 351 000.

The number of children in the village is 95 600.
Work out the number of adults in the village.

Answer………….………………… [3]

13 Paul bought the following items for his birthday party, a cake = E680, drinks = E900, snacks = E105 and fruits = E230.

(a) Complete the table to show the cost of Paul's birthday items.

Item	Cost(E)
Cake	
Drinks	
Snacks	
Fruits	

[1]

(b) Calculate the total amount Paul spent on his birthday items.

Answer (b) ……………………………… [2]

(c) Which item cost about 3 times the cost of fruits?

Answer (c) ……………..……………… [2]

(d) Paul paid E15 for each drink.

Work out the number of drinks he bought.

Answer (d) ………………………… [3]

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14 (a) Work out $12 \div \dfrac{1}{6}$.

Answer (a) …………………….……… [3]

(b) The scale of a certain plan is 1:200.

Calculate the actual distance represented by 3.5 cm on the plan in metres.

Answer (b) ……………………….metres [3]

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15 **(a)** Mrs Maseko bought 8 drums of fuel.
Each drum had 239.6 litres of fuel.

Calculate the total amount of fuel Mrs Maseko bought.

Answer (a)……………………………….litres [3]

(b) Write the next two multiples of 6.

6   12   18   24 …

Answer (b) ……………………………… [2]

16 Figure 16.1 shows rectangle *J* drawn on a grid made of 1cm by 1cm squares.
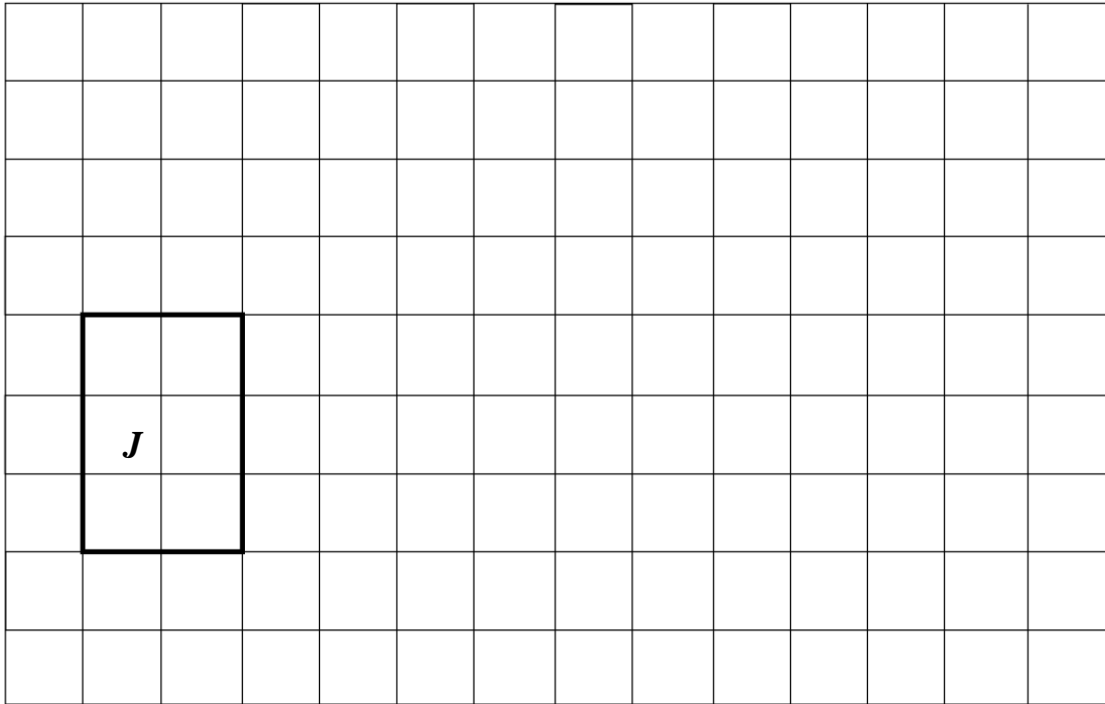
Fig. 16.1

(a) State the number of squares in a row of rectangle *J*.

Answer (a)…………………………………… [1]

(b) Calculate the area of rectangle *J*.

Answer (b)………………………………… [2]

(c) On the grid, draw a similar rectangle that has twice the area of rectangle *J*.
Label this rectangle *K*. [3]

(d) Describe the transformation that maps rectangle *J* to rectangle *K*.

Answer (d)…………………………………………………………………..
……………………………………………………………………..… [2]

17 **(a)** Zodwa bought 50 kilograms of fertiliser.
She used 23 400 grams in vegetables.
She used the rest of the fertiliser in maize.

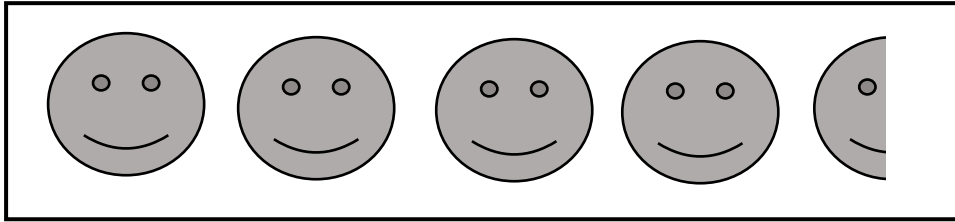Calculate the amount of fertiliser she used in maize.

Answer (a) ………………………………. [3]
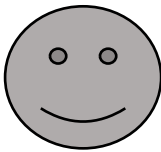
(b) The perimeter of the figure below is 25 cm.

NOT TO SCALE

9 cm   9 cm
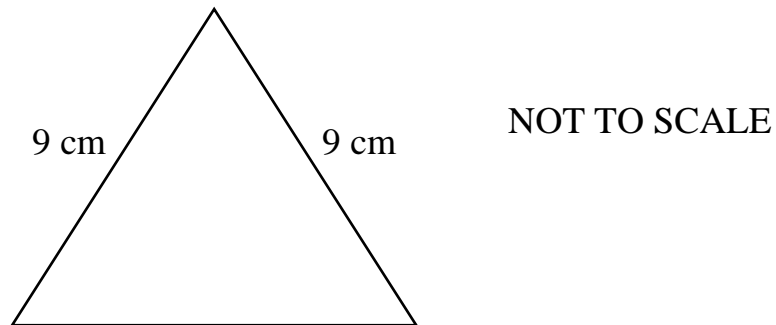
Calculate the length of the missing side.

Answer (b) ………………………………… [2]

(c) The diagram shows the number of people who visited a local shopping centre on a certain Monday.

Key:

= 20 people

= 10 people

State the number of people who visited the shopping centre on this Monday.

Answer (c) …………………………….. [1]

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