Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

MATHEMATICS **0580/13**

Paper 1 (Core) **May/June 2023**

1 hour

You must answer on the question paper.

You will need: Geometrical instruments

INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- You should use a calculator where appropriate.
- You may use tracing paper.
- You must show all necessary working clearly.
- Give non-exact numerical answers correct to 3 significant figures, or 1 decimal place for angles in degrees, unless a different level of accuracy is specified in the question.
- For π, use either your calculator value or 3.142.

INFORMATION

- The total mark for this paper is 56.
- The number of marks for each question or part question is shown in brackets [ ].

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1 Write 928 correct to the nearest ten.

View solution

..... [1]

2 Write down a fraction that is equivalent to $\frac{7}{9}$.

View solution

..... [1]

3 Work out.

$$-4+6\times3$$

View solution

..... [1]

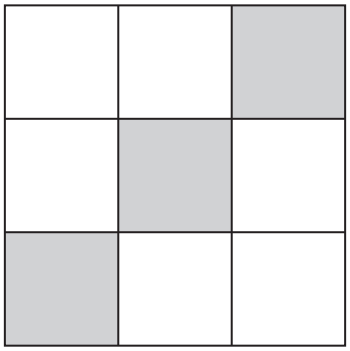
4 Bobby records the number of days a shop is open during 30 days.

View solution

	Tally	Frequency
Days open	𝍸 𝍸 𝍸 𝍸 |	
Days not open		

Complete the table. [2]

5



(a) Complete the statement.

View solution

The diagram has rotational symmetry of order ..... . [1]

(b) On the diagram, draw all the lines of symmetry.

[2]

View solution

6 Write down the reciprocal of 16 as a decimal.

View solution

..... [1]

7 The stem-and-leaf diagram shows the ages of 21 people.

1	6 9
2	1 4 4 5 8
3	2 6 7 9
4	0 2 4 6 8 9
5	3 4 5 7

Key : 1| 6 represents 16 years

(a) Find the fraction of people who are more than 30 years old.

View solution

..... [1]

(b) Work out the range.

View solution

..... [1]

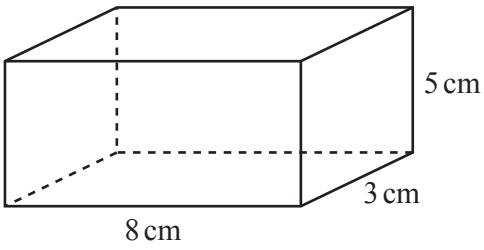
(c) Find the median.

View solution

..... [1]

8

View solution



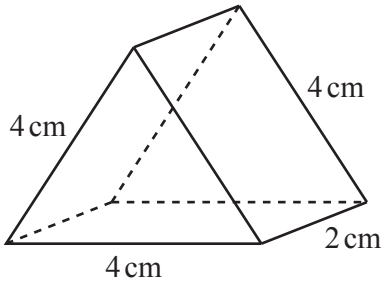
NOT TO SCALE

Find the total surface area of the cuboid.

..... cm^2 [3]

9

View solution



NOT TO SCALE

The diagram shows a triangular prism.

On the 1 cm^2 grid, draw a net of the prism.

[3]

10 Olga thinks that 87 is a prime number.

View solution

Is Olga correct?
Give a reason for your answer.

..... because ..... [1]

11 A film lasts for 2 hours 50 minutes.
The film ends at 23 05.

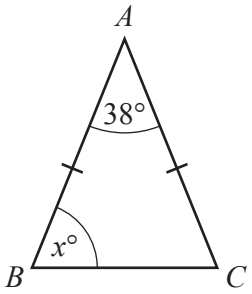
View solution

Find the time the film starts.

..... [1]

12

View solution



NOT TO SCALE

Triangle ABC is isosceles.
Angle $BAC = 38°$ and $AB = AC$.

Find the value of x.

$x =$ ..... [2]

13 By writing each number in the calculation correct to 1 significant figure, find an estimate for the value of

View solution

$$\frac{6.8 \times 10.6}{3.2 - 0.98}.$$

You must show all your working.

..... [2]

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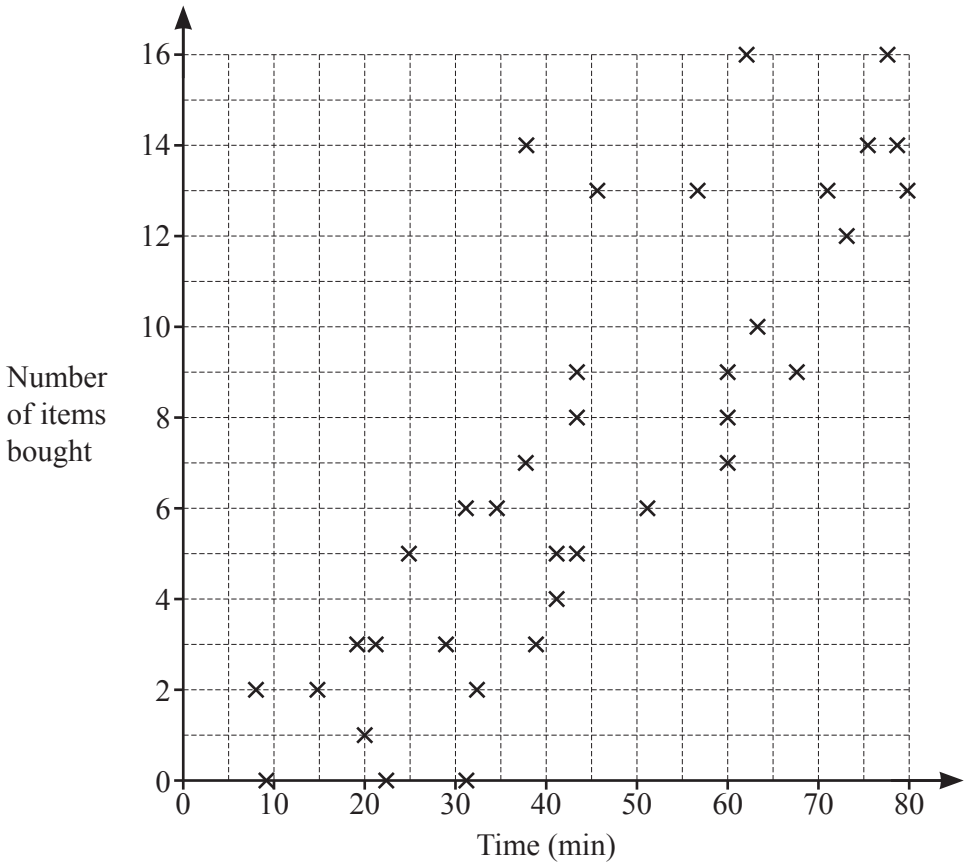
14 The scatter diagram shows information about the time spent in a shop and the number of items bought.



(a) What type of correlation is shown on the scatter diagram?

View solution

..... [1]

(b) Describe the relationship between the time spent in the shop and the number of items bought.

View solution

.....

..... [1]

(c) Draw a line of best fit on the scatter diagram. [1]

View solution

15 Simplify $d^8 \div d^2$.

View solution

..... [1]

16 Maddie changes 4000 Swiss francs into dollars when the exchange rate is $\$1 = 0.913$ Swiss francs.

View solution

Work out how many dollars she receives.

$ ..... [1]

17 Find the highest common factor (HCF) of 32 and 120.

View solution

..... [2]

18 The probability that Tom is late for school is 0.12 .
There are 200 school days this year.

View solution

Work out the expected number of times that Tom is late for school this year.

..... [1]

19 Expand and simplify.

$$(x-5)(x+8)$$

View solution

..... [2]

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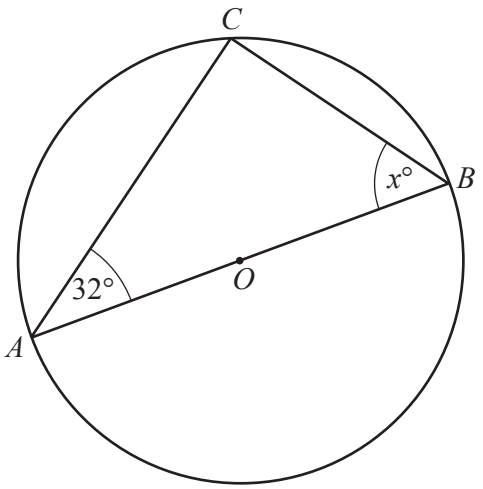
20



NOT TO SCALE

The diagram shows a circle, centre O, diameter AB.
A, B and C lie on the circumference of the circle.

(a) Write down the mathematical name of the line AC.

View solution

..... [1]

(b) Find the value of x.
Give a geometrical reason for your answer.

View solution

x = ... because ..... [2]

21 A spinner has five sides.
Each side is painted red, blue, green, yellow or orange.
The table shows some of the probabilities of the spinner landing on each colour.

Colour	Red	Blue	Green	Yellow	Orange
Probability	0.3	0.16	0.18	0.25	

View solution

(a) Complete the table. [2]

(b) Dan spins the spinner once.

View solution

Find the probability that the spinner lands on red or blue.

..... [2]

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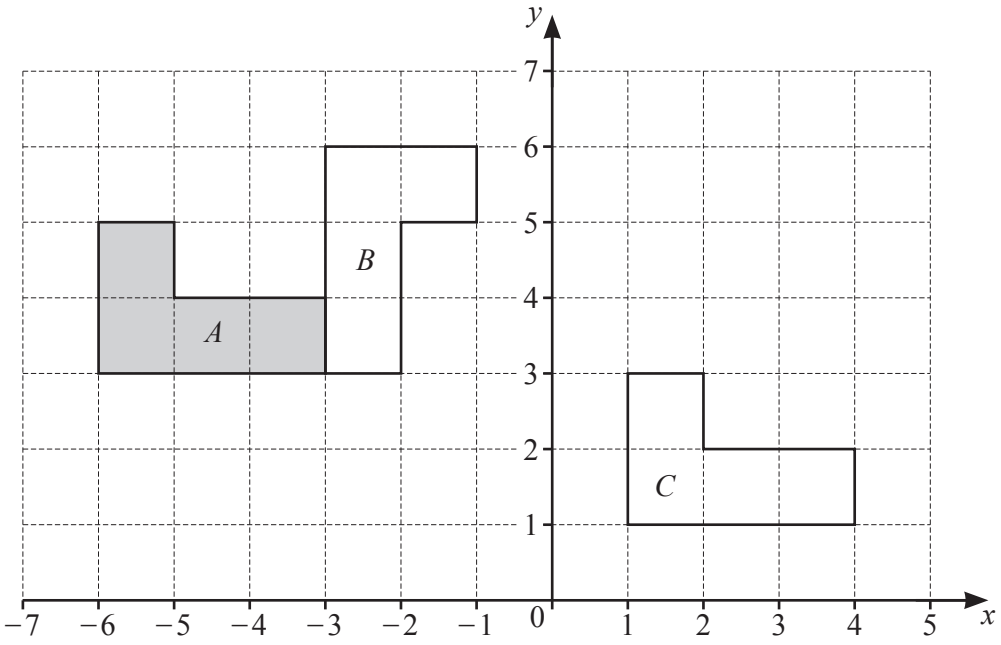
22 Vanessa invests \$8500 at a rate of 3.5% per year compound interest.

View solution

Calculate the value of her investment at the end of 6 years.
Give your answer correct to the nearest dollar.

\$ ..... [3]

23 The diagram shows three shapes, A, B and C, on a 1 cm^2 grid.



Describe fully the **single** transformation that maps

(a) shape A onto shape B

View solution

.....

..... [3]

(b) shape A onto shape C.

View solution

.....

..... [2]

24 **Without using a calculator**, work out $5\frac{11}{12}+2\frac{1}{4}$.

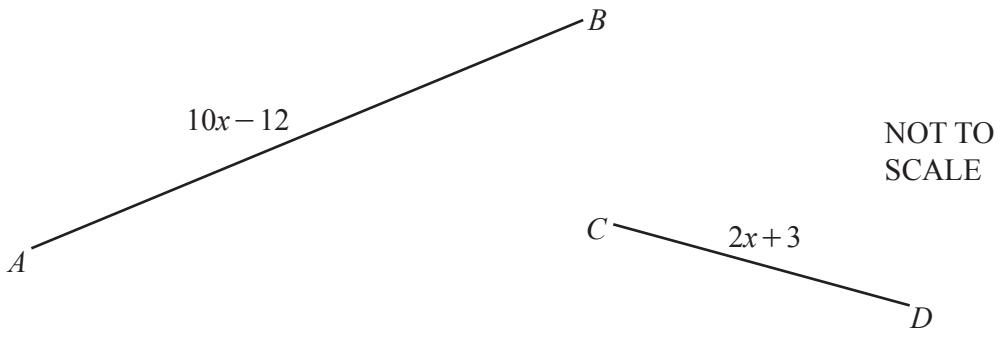
You must show all your working and give your answer as a mixed number in its simplest form.

View solution

..... [3]

25 In this question, both lengths are in centimetres.

View solution



The diagram shows two lines, AB and CD.
The length of AB is $10x-12$.
The length of CD is $2x+3$.
Line AB is 3 times as long as line CD.

Work out the value of x.

$x =$ ..... [4]

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