Cambridge Assessment
International Education

Mathematics

Stage 6

Paper 2

2023

Cambridge Primary Progression Test

Name

Class

Date

45 minutes

Additional materials: Calculator
Compasses
Protractor
Tracing paper (optional)

INSTRUCTIONS

- Answer **all** questions.
- Write your answer to each question in the space provided.
- You should show all your working on the question paper.
- You may use a calculator.

INFORMATION

- The total mark for this paper is 40.
- The number of marks for each question or part question is shown in brackets [ ].

1 Calculate.

$$8 \times \frac{3}{4}$$

..... [1]

2 Here are four calculations.

Draw a ring around the calculation with an answer of −20

24 − 4 −24 + 4 24 + 4 −24 − 4

[1]

3 Draw a ring around **all** the numbers that are common multiples of 4 **and** 6

1 2 4 6 12 24

[1]

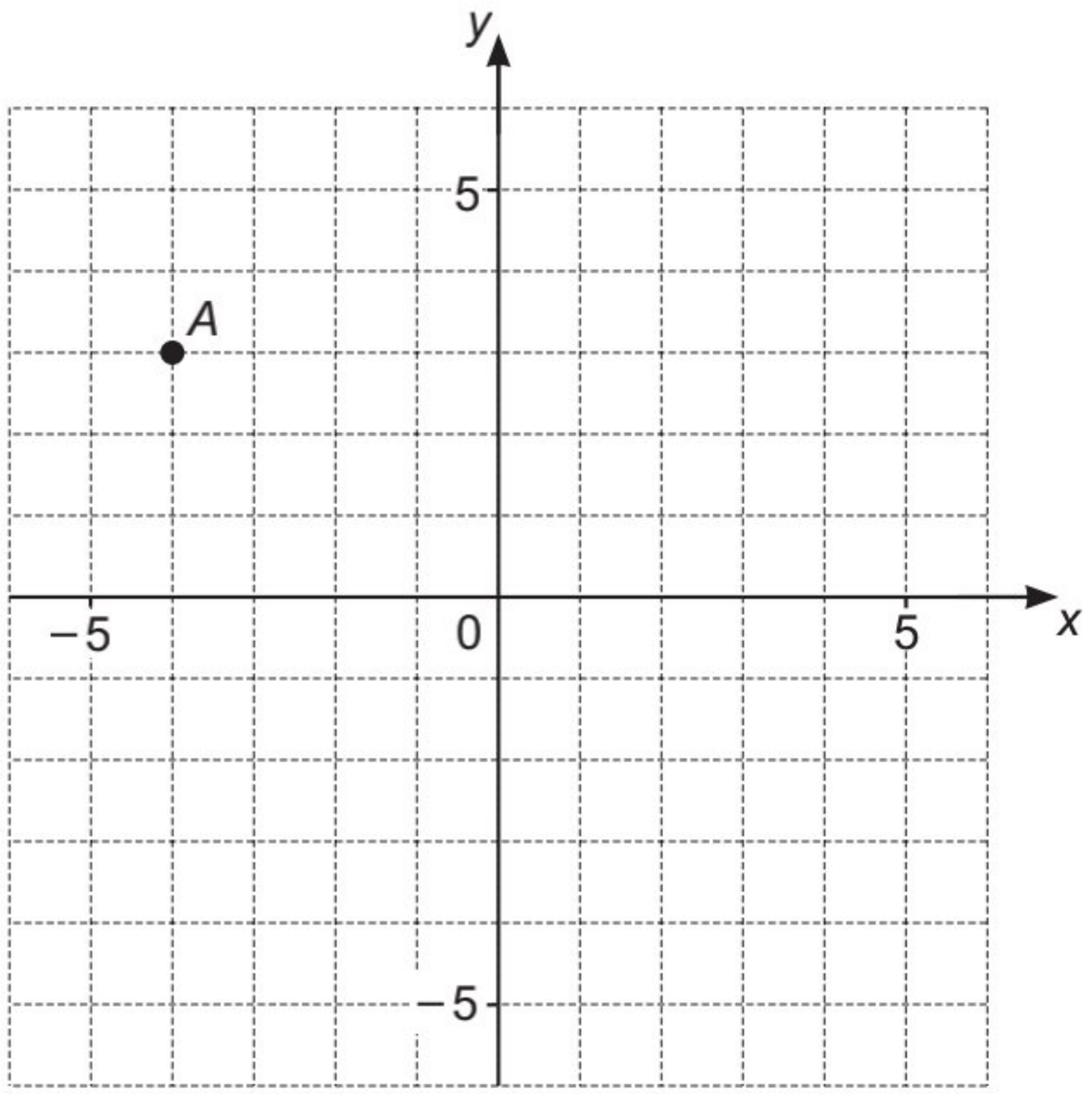
4 Calculate.

$$\frac{2}{3} + \frac{4}{5}$$

Give your answer as a mixed number.

..... [2]

5 Here is a coordinate grid.



(a) Write the coordinates of point *A*.

(..... , ...) [1]

(b) Plot the point with coordinates $(1\frac{1}{2}, -2)$ on the grid.

[1]

6 Naomi counts back from 25 in 7s.

25, 18, 11, ...

Write the number in the sequence that is closest to −15

..... [1]

7 Complete the sentence using the correct word.

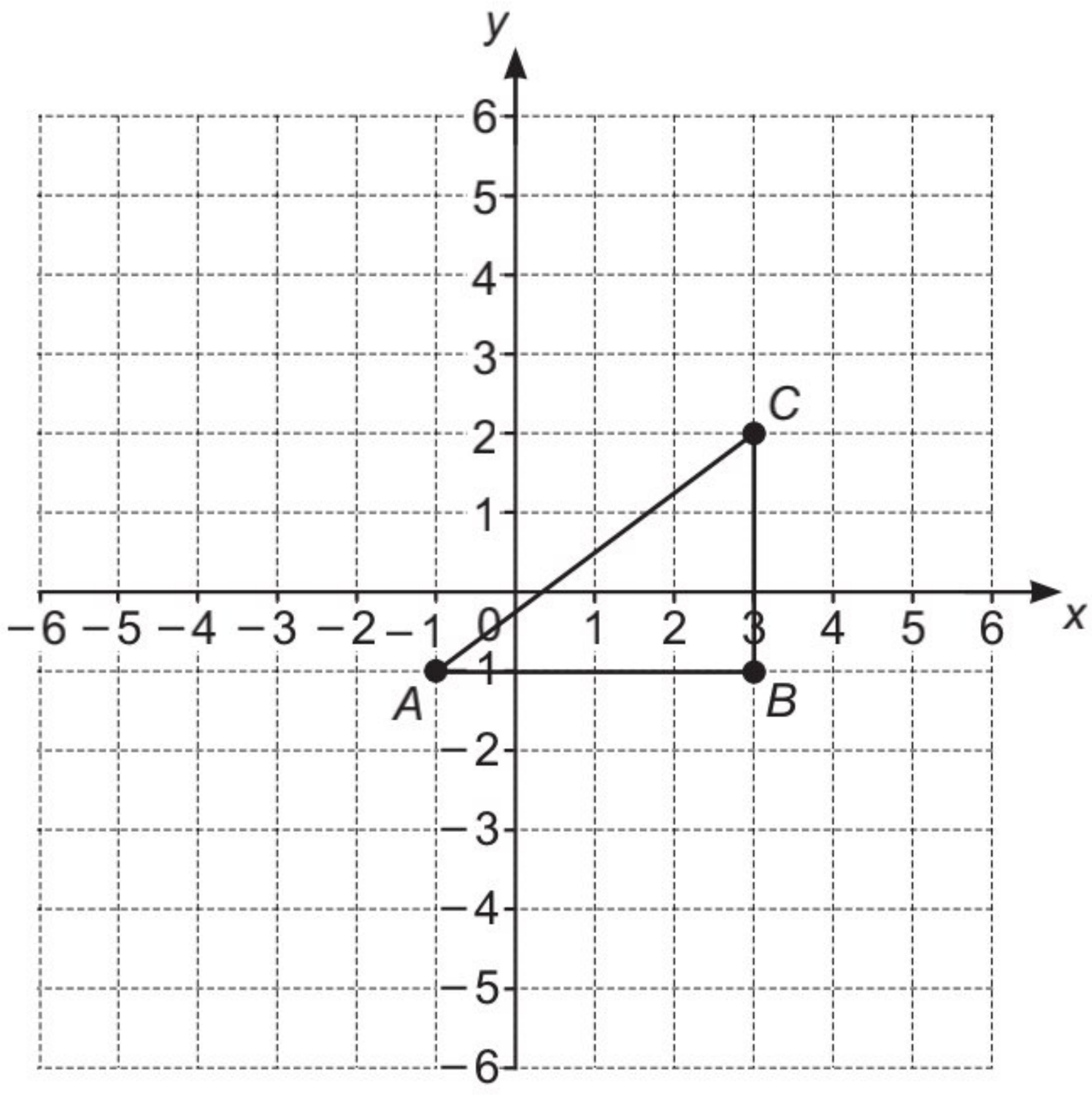
In the number 14.123 the 3 represents three ..... [1]

8 Mia has 20 apples.
She counts the number of seeds in each apple.
She shows her data in a frequency table.
She groups the data in **equal** intervals.

Number of seeds	Frequency
0 – 2	4
3 – 5	7
	8
	1

Complete her frequency table. [1]

9 Triangle *ABC* is drawn on a coordinate grid.



Triangle *ABC* is translated 3 squares up.

Write the coordinates for the new vertices of triangle *ABC*.

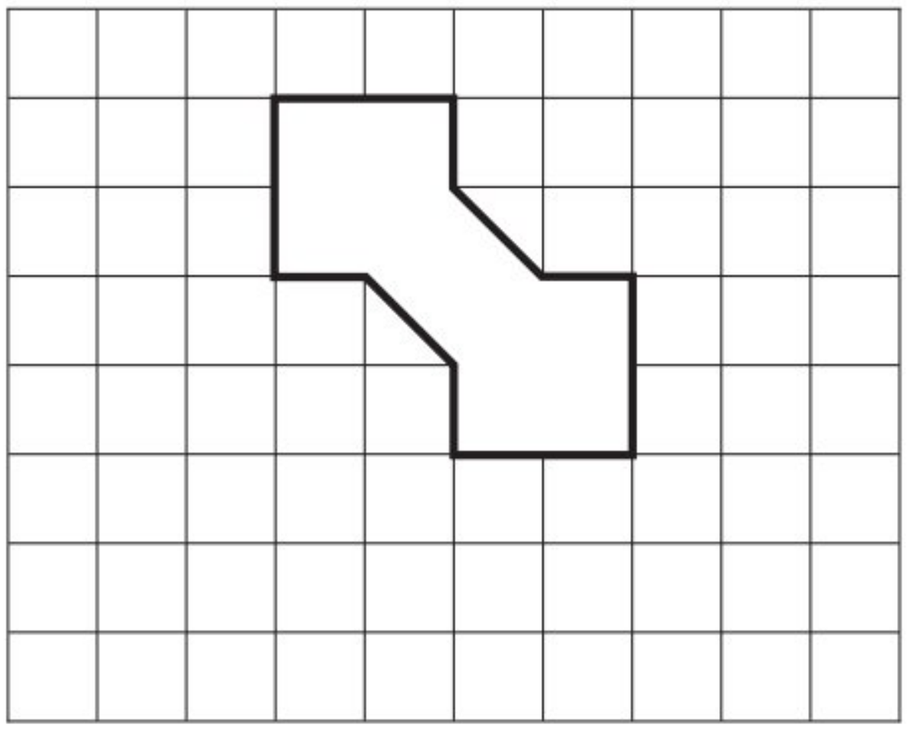
A = (..... , ...)

B = (..... , ...)

C = (..... , ...)

[2]

10 Here is a shape drawn on a grid of squares.



(a) Write the order of rotational symmetry of the shape.

..... [1]

(b) Draw a line on the shape so that the order of rotational symmetry remains the same.

[1]

11 Ahmed has **four** digit cards.
The digit on each card is different.
He uses the four cards to make a 4-digit number that is divisible by 8

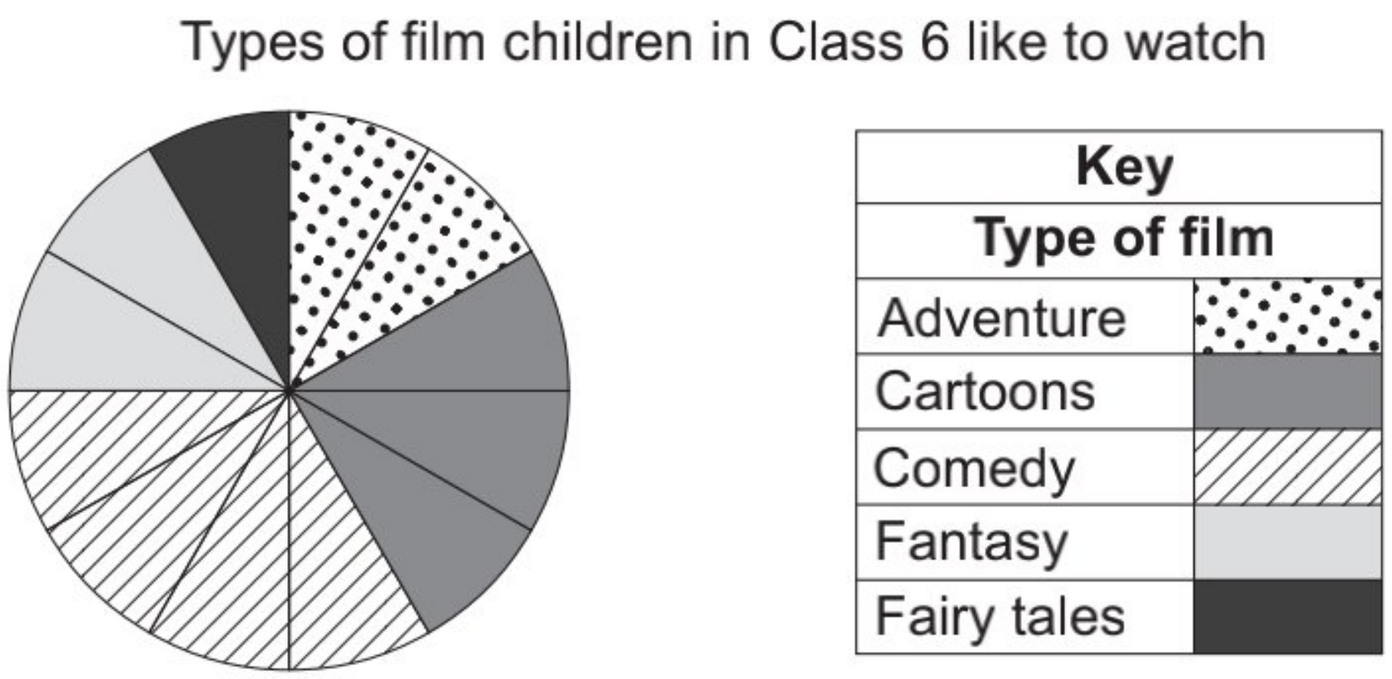
Write the **smallest** number Ahmed could make.

..... [1]

12 Calculate the difference between 5^3 and 5^2

..... [1]

13 Hassan asks the children in Class 6 which type of film they like to watch.
He draws a pie chart showing the data he collects.



(a) Write the **two** types of film the same number of children like to watch.

..... and ..... [1]

(b) 12 of the children like to watch comedy films.

Write the number of children who like to watch cartoons.

..... [1]

14 Lily chooses two different prime numbers.
Each number is less than 20
One number has 2 digits.

She adds her numbers together.
The answer is a prime number.

Write **two** different numbers Lily could choose.

..... [1]

15 Oliver joins two identical square tiles to make a rectangle.
The side length of each square tile is represented by s.

Draw a ring around the expression which represents the perimeter of the rectangle.

s + s + s + s	(s + s) × 4
s + s + s + s + s + s	(s + s + s + s) × 2

[1]

16 Write a decimal number on each answer line to make each statement correct.

843 hundredths = ...

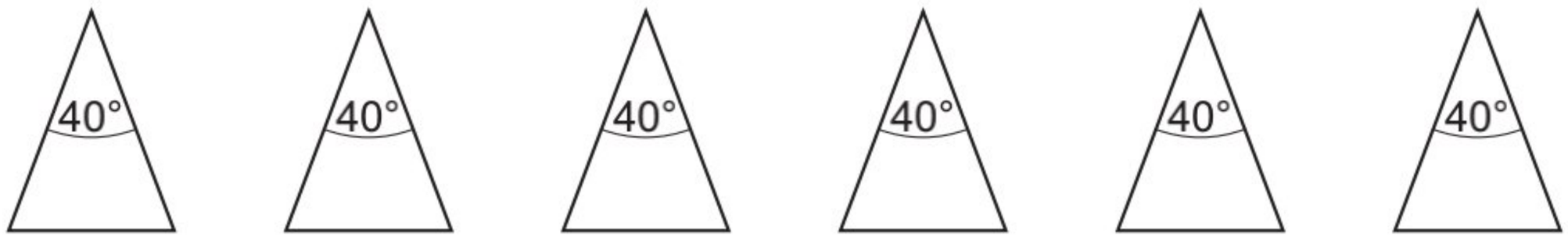
84 tenths and 3 thousandths = ...

8 ones 4 hundredths and 3 thousandths = ...

8 + 0.4 + 0.03 = ...

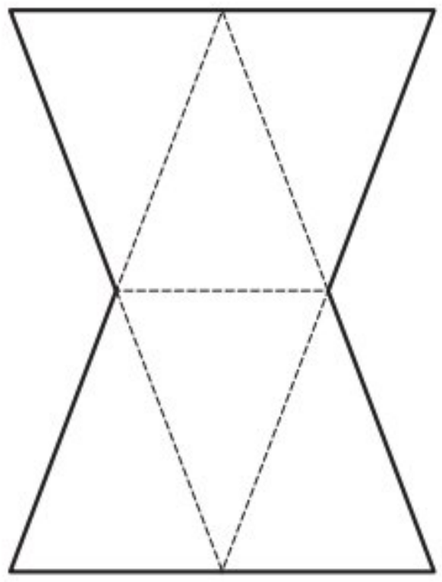
[2]

17 Here are six identical isosceles triangles.



Not drawn to scale

The six triangles are arranged to make this hexagon.



Not drawn to scale

(a) Calculate the **smallest** angle in the hexagon.

.....° [1]

(b) Calculate the **largest** angle in the hexagon.

.....° [1]

18 Angelique rolls a fair six-sided dice numbered 1 to 6 **once**.
Here are some pairs of outcomes.

Tick (✓) to show if the pairs of outcomes are equally likely or **not** equally likely.
One has been done for you.

Pairs of outcomes	**Equally likely**	**Not equally likely**
Roll an odd number **or** an even number	✓	
Roll a 3 **or** roll a 5		
Roll a **4** **or** roll an even number		
Roll a 7 **or** roll a 9		

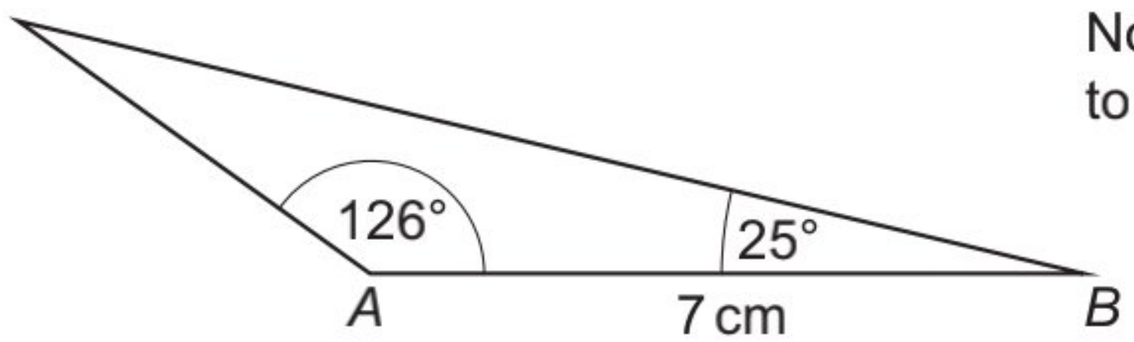
[1]

19 Complete the table of equivalent values.

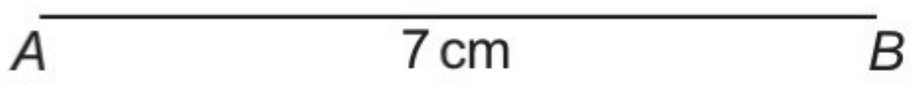
Fraction	**Decimal**	**Percentage (%)**
$\frac{7}{10}$		
	0.36	
		175

[2]

20 Here is a sketch of a triangle.

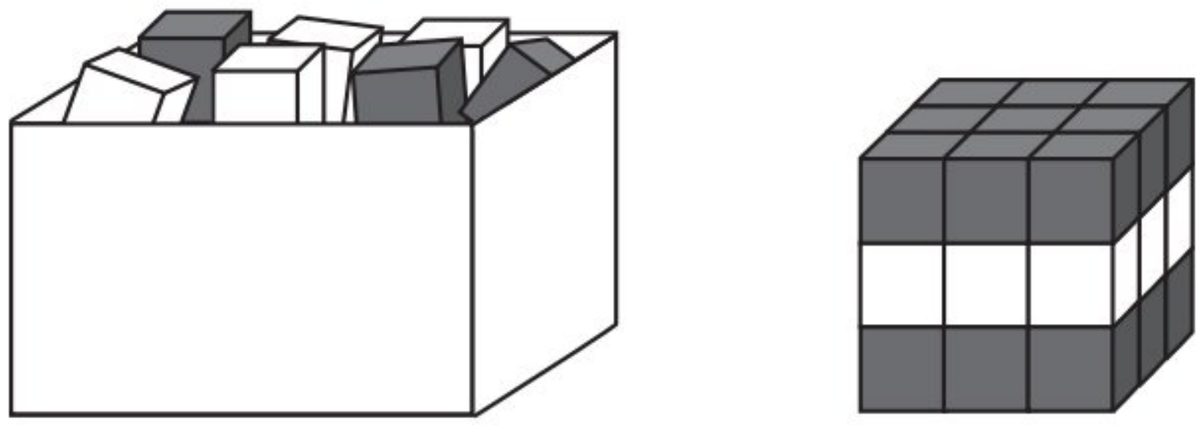


Draw the triangle accurately.
One line has been drawn for you.



[2]

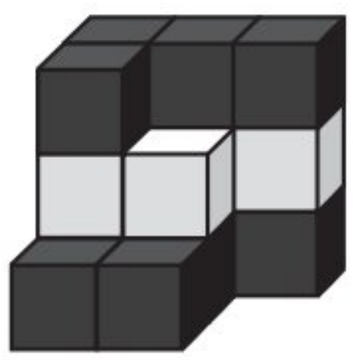
21 Jamila has black unit cubes and white unit cubes.
She uses some of the unit cubes to make this larger solid cube.



(a) Write the number of unit cubes she uses to make this larger cube.

..... [1]

(b) Jamila removes some unit cubes to make this shape.



Write the number of black cubes and white cubes she **removes** from her larger cube to make this shape.

.....black cubes

.....white cubes

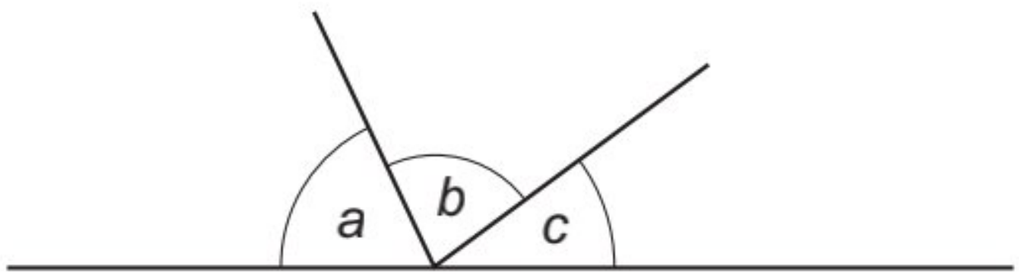
[1]

22 Yuri does seven science tests.
He scores **three different** marks.
His median mark is less than his mode.

Write a number in each box to show the **seven** marks that Yuri could score.

[1]

23 Angles *a*, *b* and *c* can be arranged to make a straight line.



Not drawn to scale

Angle *a* is smaller than angle *b*.
Angle *a* is larger than angle *c*.
The total of the two smaller angles is equal to the size of the largest angle.

Write possible values for angles *a*, *b* and *c*.

a = ... °

b = ... °

c = ... °

[2]

24 On Monday, Eva swims 60 lengths of the pool.
On Tuesday, she swims 50% **more** lengths than on Monday.
On Wednesday, she swims 50% **fewer** lengths than on Tuesday.

Calculate the **total** number of lengths she swims on the three days.

..... [2]

25 Pierre and Chen want to find out which car colour is the most common in their town.
They collect data for some of the cars in their town.
Here is the data they collect.

Car colour	Frequency
White	34
Grey	38
Red	27
Blue	31
Black	16
Other	31

(a) Pierre says,

'Grey is definitely the **most** common car colour in our town.'

Explain why Pierre could be correct.

.....

..... [1]

(b) Chen says,

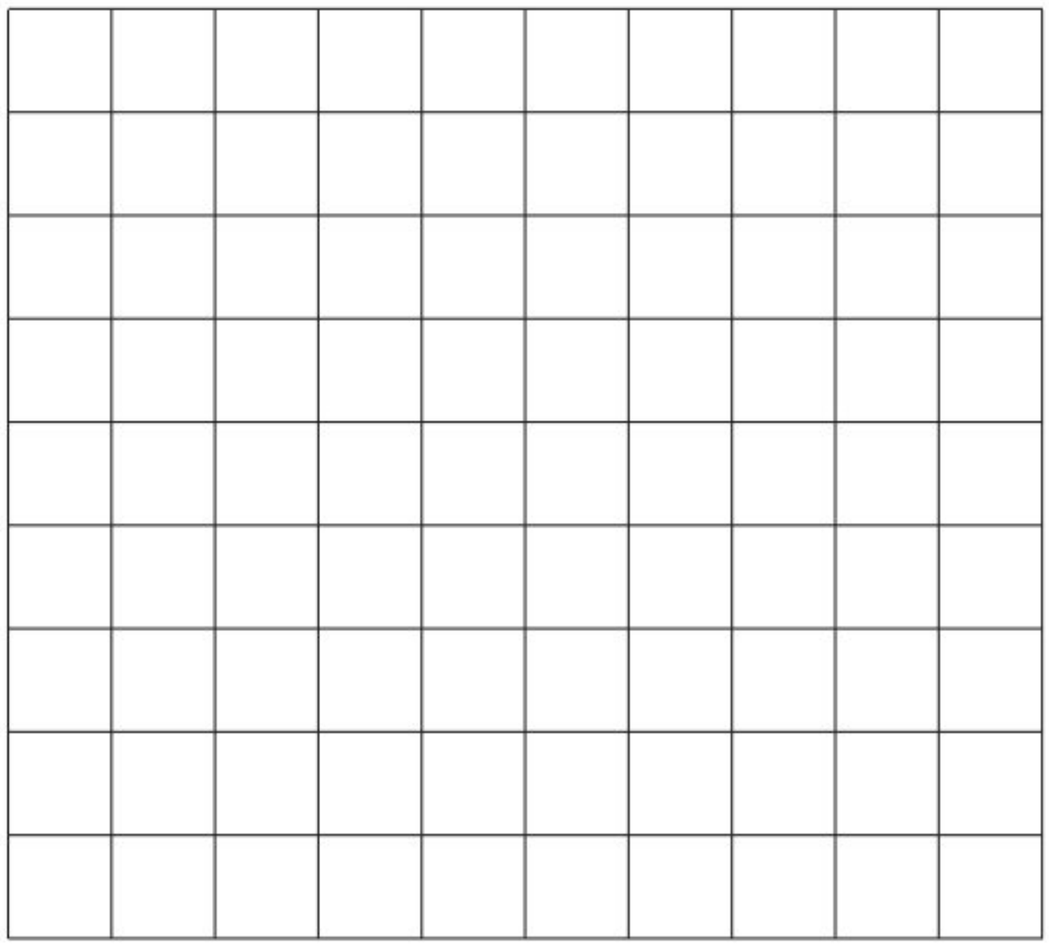
'You cannot be certain which is the most common car colour in our town, but grey appears to be a common car colour.'

Explain why Chen could be correct.

.....

..... [1]

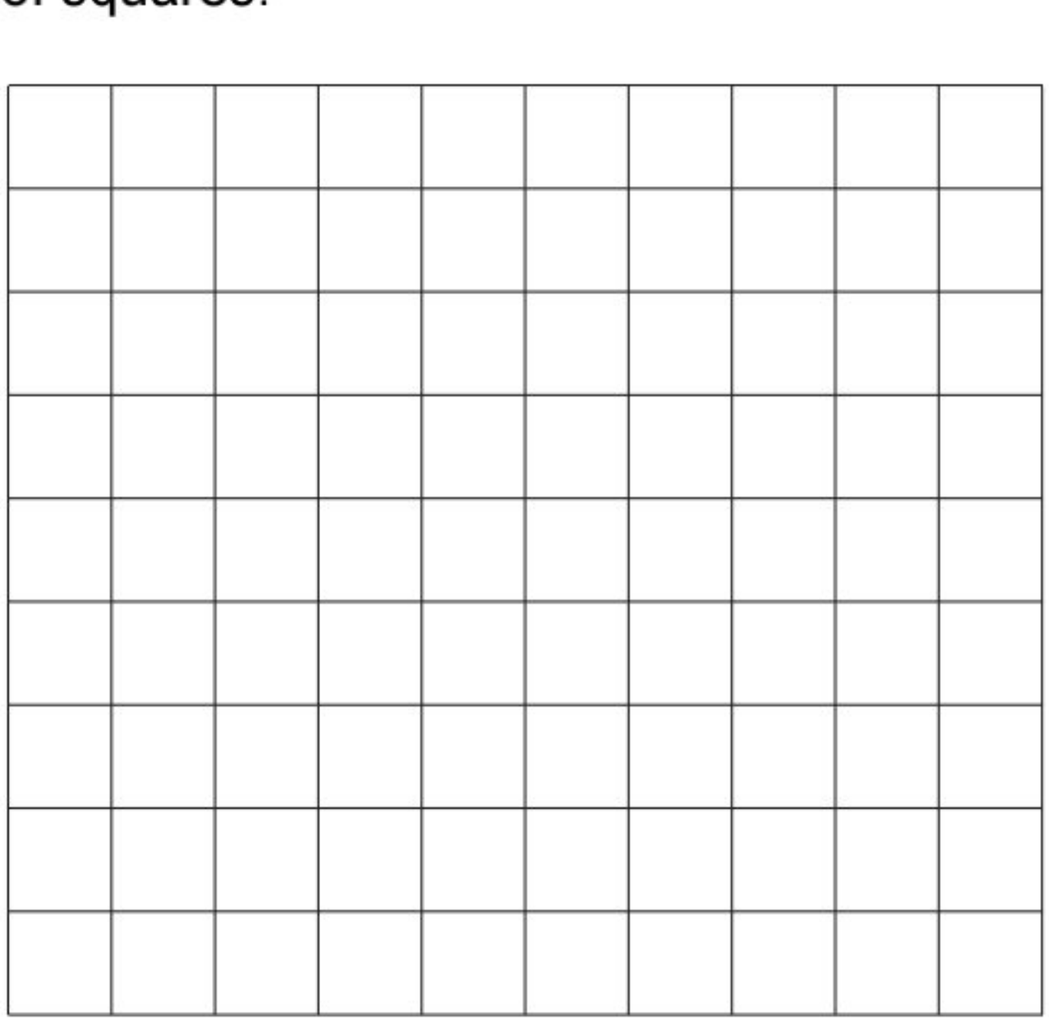
26 (a) Here is a grid of squares.



Draw a kite with **exactly** one right angle on the grid.
Use a ruler.

[1]

(b) Here is a grid of squares.



Draw a quadrilateral on the grid with

- **exactly** two right angles,
- **exactly** one pair of parallel sides.

Use a ruler.

[1]

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