Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

7314704332

MATHEMATICS **0580/13**

Paper 1 (Core) **May/June 2020**

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 [ ].

This document has **12** pages. Blank pages are indicated.

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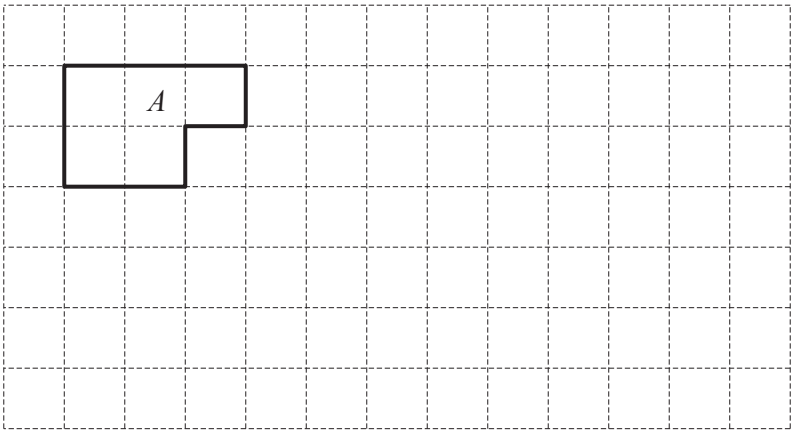
[Turn over

1 Write six hundred and seven thousand and twenty-one in figures.

..... [1]

2



On the grid, draw a shape that is congruent to shape A. [1]

3 Edelgard tries to calculate $\frac{68+18}{9-5}$.

(a) She types into her calculator $68+18\div9-5$.

Explain why this does not give Edelgard the correct answer.

..... [1]

(b) Work out the correct answer to $\frac{68+18}{9-5}$.

..... [1]

4 A train from Woodton to Northley takes 6 hours 25 minutes.
The train leaves Woodton at 19 46.

Work out the time the train arrives at Northley.

..... [1]

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5 Write down the number that is 7 more than -38.

..... [1]

6 Simplify.

$5w + 3h - 7w + 8h$

..... [2]

7 **(a)** Write down the mathematical name of a quadrilateral that has

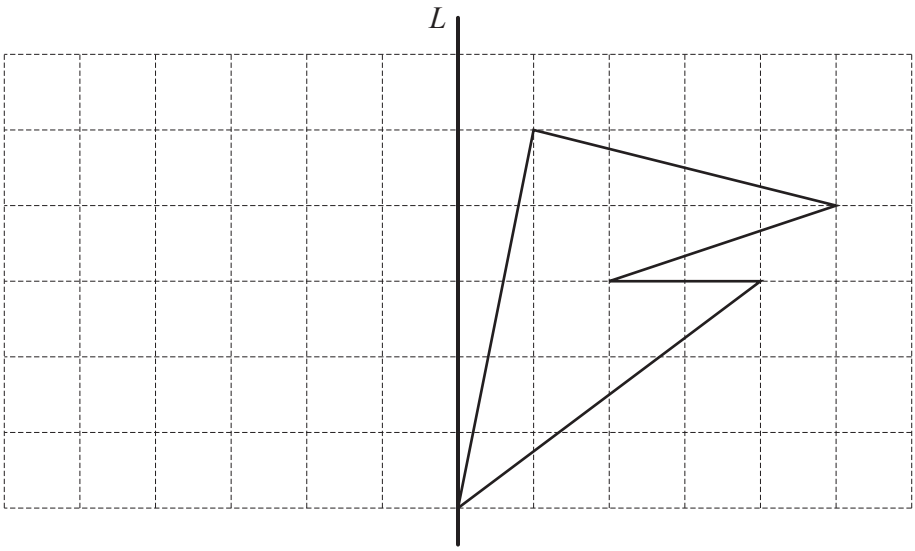
- rotational symmetry of order 1

and

- only one line of symmetry.

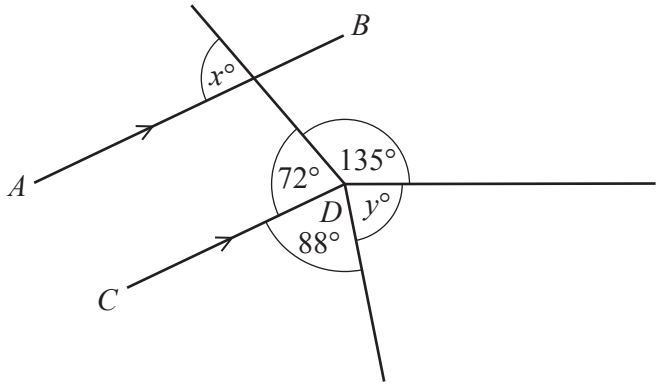
..... [1]

(b) Reflect the shape in line L.



[2]

8



NOT TO SCALE

In the diagram, AB is parallel to CD.

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

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

(b) Work out the value of y.
Give a geometrical reason for your answer.

$y =$ ..... because ..... [2]

9 32 33 34 35 36 37 38 39

From this list of numbers, write down

(a) a multiple of 8,

..... [1]

(b) a square number,

..... [1]

(c) a prime number.

..... [1]

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10 **(a)** A circular garden has diameter 11.4 m.

Draw the garden accurately, using a scale of 1 cm represents 1.5 m.

Scale: 1 cm to 1.5 m

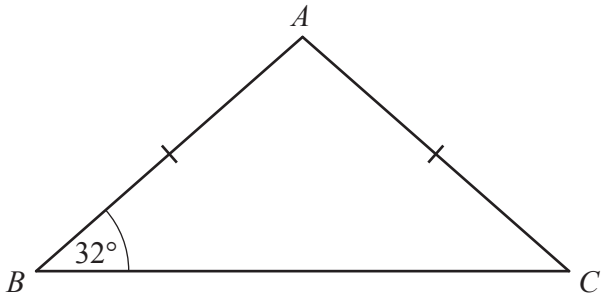
[2]

(b) On a map, the distance between two towns is 9.6 cm.
The scale of the map is 1 : 50 000.

Work out the actual distance between the two towns in kilometres.

..... km [2]

11



NOT TO SCALE

Triangle ABC is isosceles.
Angle $ABC = 32°$ and $AB = AC$.

Find angle BAC.

Angle $BAC =$ ..... [2]

12 A bag contains yellow balls, pink balls and green balls only.

The ratio yellow balls : pink balls : green balls = 7 : 3 : 5.
There are 42 yellow balls in the bag.

Work out the total number of balls in the bag.

..... [2]

13 On any day, the probability that Marcus will get a seat on the school bus is 0.93 .

(a) Write down the probability that he will **not** get a seat on the school bus today.

..... [1]

(b) There are 200 school days in a year.

Work out the expected number of days in a year that Marcus will **not** get a seat.

..... [1]

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14 Simplify.

(a) $p^2 \times p^4$

..... [1]

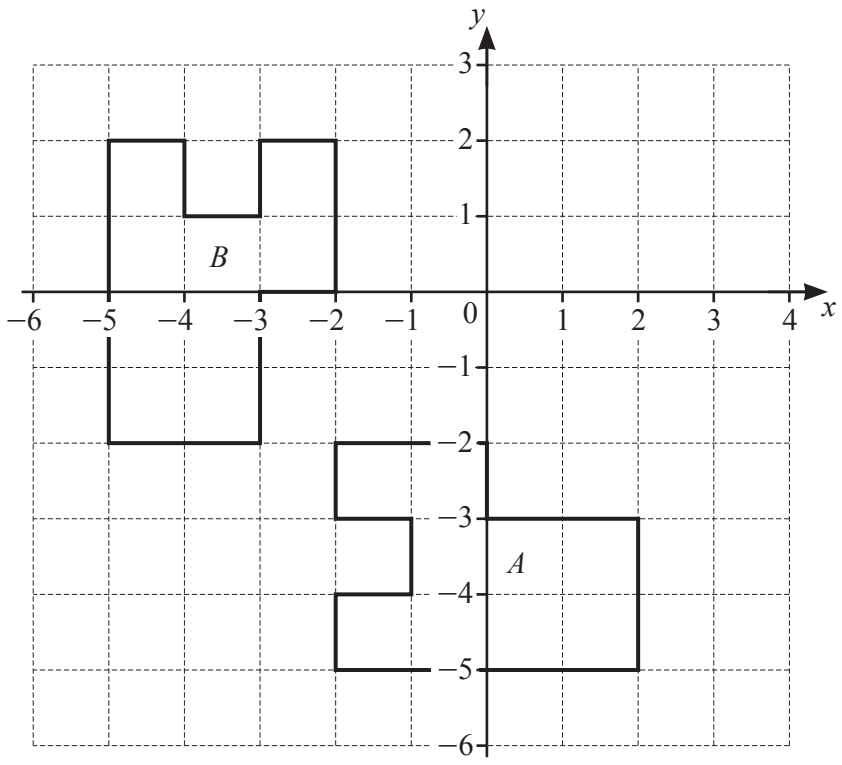
(b) $m^{15} \div m^5$

..... [1]

(c) $(k^3)^5$

..... [1]

15



Describe fully the **single** transformation that maps shape *A* onto shape *B*.

.....

..... [3]

16 **Without using a calculator**, work out $3\frac{1}{4} - 2\frac{2}{3}$.
You must show all your working and give your answer as a fraction in its simplest form.

..... [3]

17 A chef buys some cheese from France.
200 g of cheese costs 3.45 euros.
The exchange rate is \$1 = 0.84 euros.

Work out the maximum mass of cheese the chef can buy with \$150.
Give your answer in kilograms, correct to 1 decimal place.

..... kg [4]

18 Sonia wants to invest \$5000 for 6 years.

Bank A pays compound interest at a rate of 3.5% per year.
Bank B increases the \$5000 by 22% at the end of 6 years.

Which bank will give Sonia the most money at the end of 6 years and by how much?
You must show all your working.

Bank A

Bank B

Bank ..... will give \$ ..... more money. [5]

19 By rounding each number correct to 1 significant figure, estimate the value of

$$\frac{71 \times 32.4}{4.8^2}.$$

You must show all your working.

..... [2]

20 Des thinks of two numbers.
The sum of his two numbers is −6.
The difference between his two numbers is 62.

Find the two numbers.

..... and ..... [4]

21 A solid cylinder has radius 3 cm and height 4.5 cm.

Calculate the **total** surface area of the cylinder.

..... cm^2 [4]

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