

# Cambridge IGCSE<sup>™</sup>

CANDIDATE NAME					
CENTRE NUMBER			CANDIDATE NUMBER		



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  $\pi$ , 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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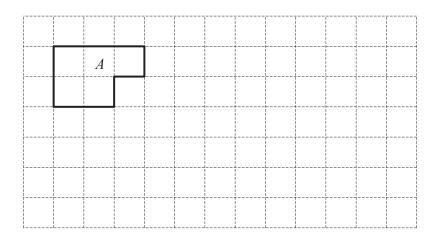
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[Turn over

1	White cir.	harm dead	o m d		th arranged	o m d	+		4	
1	Write six	nunarea	and	seven	mousand	and	twenty	/-one i	$\Pi I$	igures.

.....[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  $68+18 \div 9-5$ .

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]

_	XX7	41	414 :- 7		20
	write down	the number	that is 7	more man	- 10

 Γ1	]	ı
L	J	

6 Simplify.

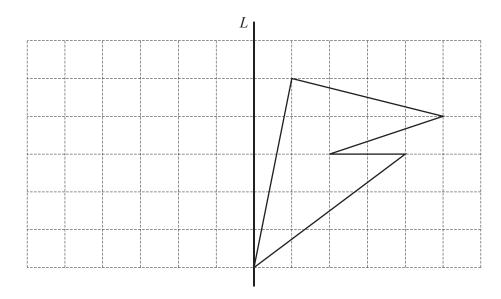
and

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

- 7 (a) Write down the mathematical name of a quadrilateral that has
  - rotational symmetry of order 1
  - only one line of symmetry.

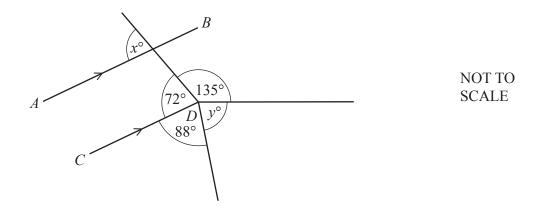


**(b)** Reflect the shape in line L.



[2]

8



In the diagram, AB is parallel to CD.

(a)	Find the value of <i>x</i> .
	Give a geometrical reason for your answer

x =	because	[2	1
~~		1-	

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

From this list of numbers, write down

(a) a multiple of 8,

9

.....[1]

**(b)** a square number,

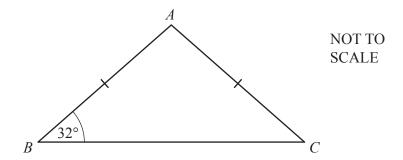
.....[1]

(c) a prime number.

.....[1]

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 1:50000.
		Work out the actual distance between the two towns in kilometres.
		km [2]

11



Triangle ABC is isosceles. Angle  $ABC = 32^{\circ}$  and AB = AC.

Find angle BAC.

Angle $BAC = \dots [2]$
-------------------------

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.

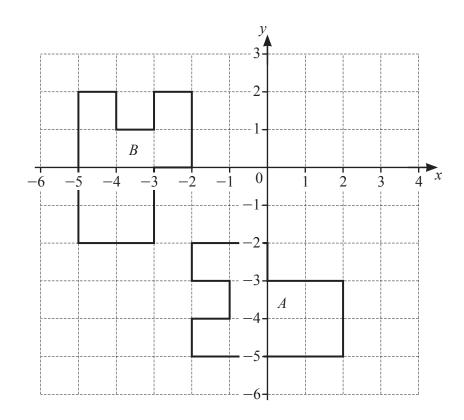
.....[1]

14 Simplify.

(a)	$p^2$	$\times p^4$
` '	1	1

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

15



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

16	<b>Without using a calculator</b> , 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.	
	·	[4]
21	A solid cylinder has radius 3 cm and height 4.5 cm.	
	Calculate the <b>total</b> surface area of the cylinder.	
		cm <sup>2</sup> [4]

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