

Cambridge IGCSE[™]

CANDIDATE NAME					
CENTRE NUMBER			CANDIDATE NUMBER		

MATHEMATICS 0580/11

Paper 1 (Core) October/November 2021

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. Any blank pages are indicated.

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[Turn over

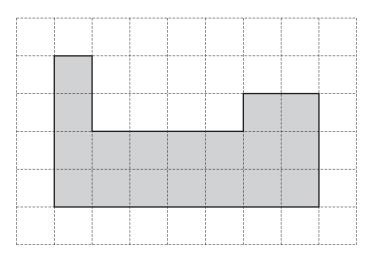
1

Fraction		Decimal		Percentage
$\frac{1}{2}$	=	0.5	=	50
	=	0.25	=	
$\frac{1}{5}$	=		=	20

Complete the table.

[3]

2

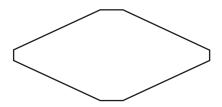


This shape is drawn on a 1 cm² grid.

Find the perimeter of the shape.

..... cm [1]

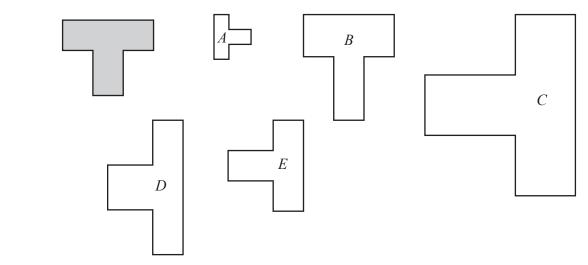
3



Write down the order of rotational symmetry of this shape.

.....[1]

4



Write down the letter of the shape that is congruent to the shaded shape.

Г1	1
 1	

5 The number of items that each of 22 people buy in a supermarket is shown in the stem-and-leaf diagram.

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

Key: 1 | 1 represents 11 items

(a) Find the mode.

.....[1]

(b) Find the median.

.....[1]

6	(a)	Change 2.7 kilometres into metres.
	(b)	Find the number of hours in 5 days.
		h [1]
7	Har	nk flies from Los Angeles to Shanghai.
	(a)	The flight departs on Friday 22 July at 21 40. The flight takes 13 hours 35 minutes. The local time in Shanghai is 15 hours ahead of the local time in Los Angeles.
		Find the day, date and time in Shanghai when Hank's flight arrives.
		Day, Date, Time
	(b)	The cost of the flight is \$920. The exchange rate is $$1 = 6.87$ Chinese yuan.
		Find the cost of the flight in yuan.
		[1]
		yuan [1]
8		P = 2n - 3t
	Fine	d the value of n when $P = 9$ and $t = 8$.

 $n = \dots$ [3]

9 The scale drawing shows the positions of two towns, P and Q. The scale is 1 cm represents 4 km.





Scale: 1 cm to 4 km

(a) Find the actual distance between town P and town Q.

. km	[2]	ĺ
 . KIII	141	ı

(b) Measure the bearing of town Q from town P.

(c) Town X is 28 km from town P on a bearing of 140° .

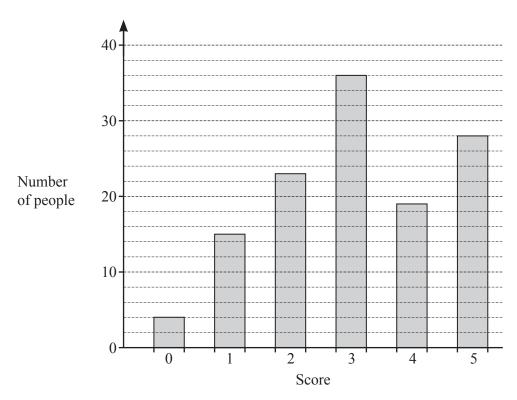
On the scale drawing, mark the position of town *X*.

10 Chung invests \$2460 at a rate of 3.5% per year simple interest.

Calculate the total amount of his investment at the end of 4 years.

\$[3]

11 125 people taste a new drink. Each person gives a score out of 5. The bar chart shows the results.



Calculate the mean score.

.....[3]

(a)	7,	13,	19,	25,					
	Find the	next teri	m in thi	s seque	ence.				
(b)	30,	26,	22,	18,					
	Write dov	wn the t	erm to t	term ru	le for this	sequence.			
									[
(c)									
	Find the	nth term	for this	s seque	ence.				
									[
A ci	ircular disc	has cir	cumfer	ence 25	50 cm.				
Calo	culate the 1	radius o	f the dis	sc.					
								cm	[
(a)	Factorise	comple	etely. 18 <i>x</i>	$x^2 - 12x$	c				
									[
(b)	Expand a	nd simp	olify.	-5)(x-	-3)				
									[
	(c) A ci	Find the factorise (b) 30, Write dov (c) -1, Find the factorise (a) Factorise	Find the next term (b) 30, 26, Write down the total (c) -1, 1, Find the <i>n</i> th term A circular disc has circular dis	Find the next term in this (b) 30, 26, 22, Write down the term to the serious of the serious of the distance	Find the next term in this sequence (b) 30, 26, 22, 18, Write down the term to term ru (c) -1, 1, 3, 5, Find the <i>n</i> th term for this sequence A circular disc has circumference 25 Calculate the radius of the disc. (a) Factorise completely. 18x ² - 12x	Find the next term in this sequence. (b) 30, 26, 22, 18, Write down the term to term rule for this (c) -1, 1, 3, 5, Find the <i>n</i> th term for this sequence. A circular disc has circumference 250 cm. Calculate the radius of the disc.	Find the next term in this sequence. (b) 30, 26, 22, 18, Write down the term to term rule for this sequence. (c) -1, 1, 3, 5, Find the <i>n</i> th term for this sequence. A circular disc has circumference 250 cm. Calculate the radius of the disc. (a) Factorise completely. 18x ² - 12x	Find the next term in this sequence. (b) 30, 26, 22, 18, Write down the term to term rule for this sequence. (c) -1, 1, 3, 5, Find the <i>n</i> th term for this sequence. A circular disc has circumference 250 cm. Calculate the radius of the disc. (a) Factorise completely. 18x²-12x	Find the next term in this sequence. (b) 30, 26, 22, 18, Write down the term to term rule for this sequence. (c) -1, 1, 3, 5, Find the <i>n</i> th term for this sequence. A circular disc has circumference 250 cm. Calculate the radius of the disc. cm (a) Factorise completely. 18x²-12x

15		hie buys 73 books for her school. h book costs \$21.95.	
	(a)	By rounding each number correct to 1 significant figure, estimate the total cost of these books.	
		\$[1	[]
	(b)	Write down whether this estimate is greater or less than the exact cost.	
		Explain how you decide, without working out the exact cost.	
		because	
		[1]
16	Calo	culate the size of one interior angle of a regular octagon.	
		[2	2]

17 The table shows the relative frequency of the games won by a football team.

Result of game	won	lost	drawn
Relative frequency	0.1		

The number of games lost is twice the number of games drawn.

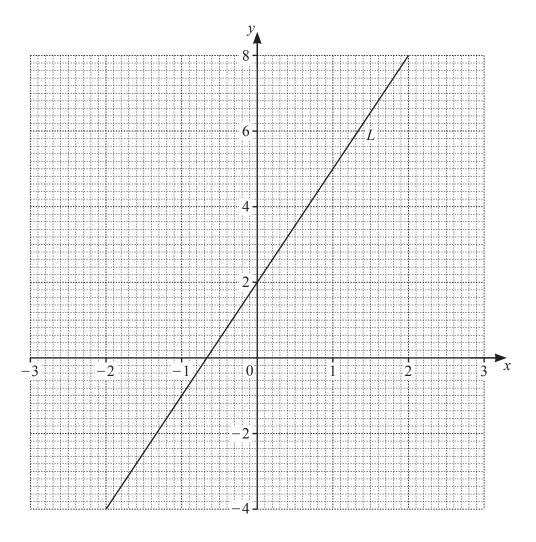
Complete the table.

[3]

18 Without using a calculator, work out $1\frac{5}{6} + \frac{2}{5}$. You must show all your working and give your answer as a mixed number in its simplest form.

......[3]

19



Find the equation of line *L*. Give your answer in the form y = mx + c.

$$y =$$
 [3]

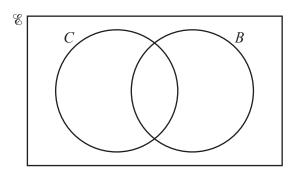
20	There	are 50	families	in a	village.
----	-------	--------	----------	------	----------

 $C = \{\text{families who own a car}\}\$

 $B = \{\text{families who own a bicycle}\}\$

- 23 families own a car.
- 10 families own a car and a bicycle.
- 6 families own no cars and no bicycles.

(a) Complete the Venn diagram.

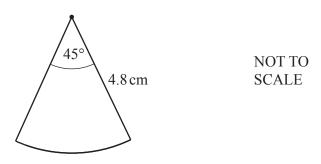


[2]

(b) Find $n(C \cup B)$.

	1
L	-

21



The diagram shows a sector of a circle with radius 4.8 cm and sector angle 45°.

Calculate the area of the sector.

 cm^2	[2]

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