

Cambridge IGCSE[™]

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MATHEMATICS 0580/11

Paper 1 (Core) May/June 2022

1 hour

You must answer on the question paper.

You will need: Geometrical instruments

INSTRUCTIONS

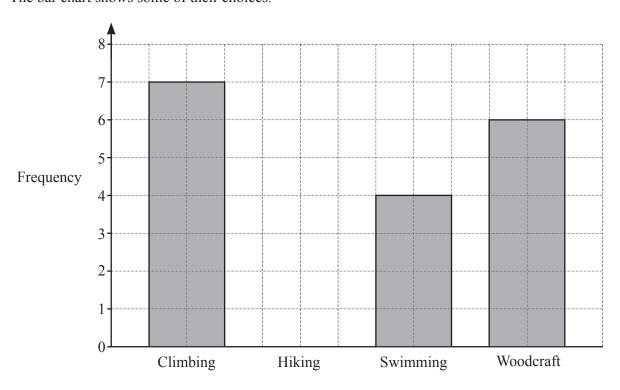
- Answer all questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do not use an erasable pen or correction 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.

1 Students at an activity centre choose one of four activities. The bar chart shows some of their choices.



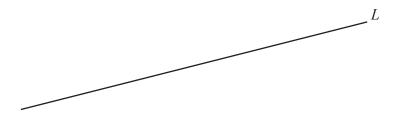
(a) 5 students choose hiking.

Complete the bar chart. [1]

(b) Write down the most popular activity.

.....[1]

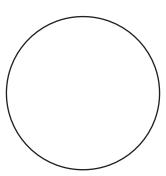
2



Draw a line that is perpendicular to line L.

[1]

3 (a)



The diagram shows a circle.

On the diagram, draw a chord.

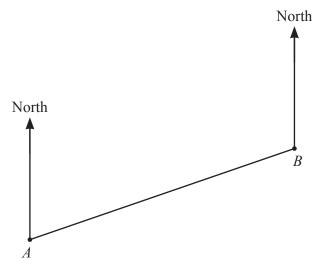
[1]

(b) Another circle has a diameter of 28 cm.

Find the radius of this circle.



4 The scale drawing shows the positions of town A and town B. The scale is 1 cm represents 15 km.



Scale: 1 cm to 15 km

(a) Find the actual distance between town A and town B.

	km	[2]
•••••	17111	L-1

(b) Measure the bearing of town B from town A.

.....[1]

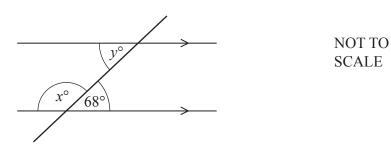
5 Change 0.56 kilometres into metres.

m [1	Ì
	1	I

6 Write these numbers in order, starting with the smallest.

$$\frac{6}{17}$$
 34% $\frac{9}{25}$ 0.345

7



The diagram shows two parallel lines and a straight line crossing them.

Find the value of x and the value of y.

$$x = \dots$$

$$y = \dots$$
 [2]

8	 Here is some information about six numbers: The lowest number is 37. The range is 24. The mode is 43. The median is 46. One number is a multiple of 11.
	Find the other five numbers.
	37, [4]
9	Calculate $4^5 - 5^4$.
	[1]
10	Jason starts a run at 10.05 am and finishes at 1.02 pm.
	Work out the time Jason takes to complete the run.
	h min [1]

11	Calculate	$\frac{1-0.7}{0.45-0.38}$,	giving your answer correct to 4 significant figures.
----	-----------	-----------------------------	--

.....[2]

12 Kirsty changes \$380.80 into pounds (£) when £1 = \$1.19.

Calculate the amount Kirsty receives.

£[2]

13 A 4-sided spinner is numbered 1, 2, 3 and 4. The table shows the probability of the spinner landing on 1, 2 and 4.

Number	1	2	3	4
Probability	0.27	0.18		0.32

Complete the table.

[2]

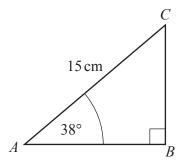
14 Without using a calculator, work out $\frac{3}{7} - \frac{2}{21}$.

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

.....[2]

7

15



NOT TO SCALE

The diagram shows a right-angled triangle, ABC. AC = 15 cm and angle $BAC = 38^{\circ}$.

Calculate BC.

16 v = 3 - 5t

(a) Work out the value of v when t = 4.

$$v = \dots$$
 [1]

(b) Make *t* the subject of the formula.

$$t = \dots$$
 [2]

17 Kim has a 6-sided spinner numbered 1 to 6. She spins it 63 times and her scores are shown in the table.

Score on spinner	1	2	3	4	5	6
Frequency	12	7	15	11	8	10

(a)	Find the	relative	frequency	of scoring	a 5	with	this	spinner
(a)	I'lliu tiic	TCTattvC	nequency	or scoring	$a \mathcal{I}$	VV I LII	ums	spinner.

|--|

(b) Work out the mean score.

18 Factorise completely.

$$14xy - 7y^2$$

19	Lin invests \$16000 at a rate of $r\%$ per year simple interest. At the end of 5 years, she has a total amount of \$17920.		
	Find the value of r .		
	r =	=	[3]
20	22, 17, 12, 7, 2, (a) Find the next term of the sequence.		
	(b) Find the <i>n</i> th term of the sequence.		[1]
21	Write down an irrational number with a value between 10 and 20.		[2]
			[1]

22 The table shows the population and area of three countries in 2020.

Country	Population	Area (km ²)		
Nigeria	2.06×10^{8}	9.11×10^5		
Comoros	8.70×10^5	1.86×10^3		
Vietnam	9.73×10^7	3.10×10^5		

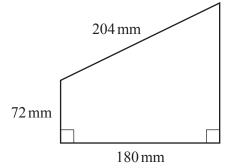
1	(\mathbf{a})	Calculate the	difference in	nonulation	hatwaan	Migaria	and Wietnam
١	(a)	Calculate the	difference in	population	Detween	INIGCHA	and victilain.

	[1]
--	-----

(b) Which of Comoros or Vietnam has the greater population density? You must show all your working.

Population density =
$$\frac{\text{population}}{\text{area}(\text{km}^2)}$$

23



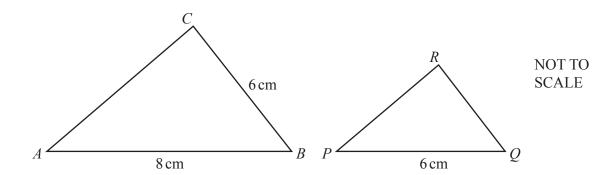
NOT TO SCALE

Work out the area of this trapezium.

..... mm² [5]

Question 24 is printed on the next page.

24



Triangle ABC is mathematically similar to triangle PQR.

Calculate QR.

$$QR = \dots$$
 cm [2]

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