

## **Cambridge International Examinations**

Cambridge International General Certificate of Secondary Education

IGCSE			
CANDIDATE NAME			
CENTRE NUMBER		CANDIDATE NUMBER	
MATHEMATICS			0580/12
Paper 1 (Core)		Octol	ber/November 2017
			1 hou
Candidates answ	ver on the Question Paper.		
Additional Materi	als: Electronic calculator Tracing paper (optional)	Geometrical instruments	

## **READ THESE INSTRUCTIONS FIRST**

Write your Centre number, candidate number and name on all the work you hand in.

Write in dark blue or black pen.

You may use an HB pencil for any diagrams or graphs.

Do not use staples, paper clips, glue or correction fluid.

DO NOT WRITE IN ANY BARCODES.

Answer all questions.

If working is needed for any question it must be shown below that question.

Electronic calculators should be used.

If the degree of accuracy is not specified in the question, and if the answer is not exact, give the answer to three significant figures. Give answers in degrees to one decimal place.

For  $\pi$ , use either your calculator value or 3.142.

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [ ] at the end of each question or part question.

The total of the marks for this paper is 56.



1	Write, in figures, fourteen thousand and twenty seven.	
		[1]
2	One day, at noon, in Maseru, the temperature was 17 °C. At midnight the temperature was 20 °C lower.	
	Work out the temperature at midnight.	
		°C [1]
3	Write down the value of $12^0$ .	
		[1]
		[+]
4	Write $5.17 \times 10^{-3}$ as an ordinary number.	
		[1]
		[*]
5	Write the following in order of size, starting with the smallest.	
	$\frac{31}{50}$ 64% $\frac{5}{8}$ 0.63	
	30 8	
	<	<[2]
	smallest	
6	A taxi journey costs \$4.50, plus 80 cents for each kilometre travelled. Julianna travels 7 km.	
	Work out the cost of her journey.	
		\$[2]
		[-]

7 Work out.

$$\frac{6.32 + 2.06}{4.15 - 0.12}$$

Give your answer correct to 1 decimal place.

**8** (a) 1 and 12 are factors of 12.

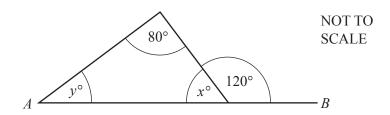
Write down all the other factors of 12.

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۰	• •	 	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	• •	•	• •	• •	٠	٠	٠	٠	٠	٠	٠	• •	• •	• •	٠	٠	٠	٠	•	٠	٠	٠	٠	٠	٠			•	- 1

**(b)** Write down the multiples of 9 between 20 and 40.

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9



In the diagram, AB is a straight line.

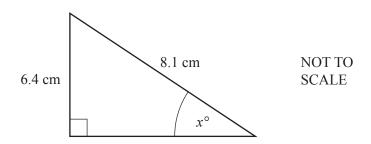
Find the value of x and the value of y.

x =	
y =	[2]

10 Write 55 g as a percentage of 2.2 kg.

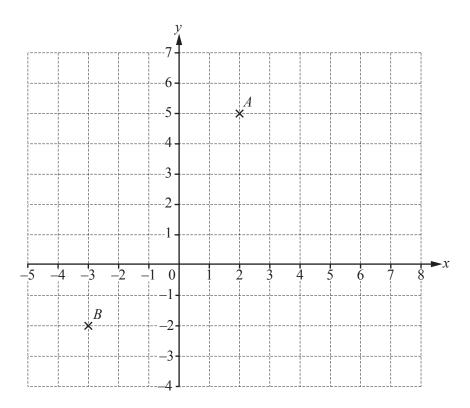
11		rea of a triangle is ength of its base is					
	Calcu	late the perpendic	cular height of the t	riangle.			
							cm [2]
12		As the temperature What type of corre	e increases, the nur elation is this?	mber of ice cream	s sold increases.		
							[1]
		Write down the ty	rpe of correlation t	here is between the	he height of an ad	ult and the amount	of money
							[1]
13			ining four types of he bag at random.	`sweet.			
		Sweet	Mint	Fruit	Toffee	Chocolate	
		Probability	0.15	0.3		0.2	
	Comp	olete the table.					
							[2]
14	The le	ength, <i>l</i> metres, of	a ship is 362 m, co	orrect to the neares	st metre.		
			about the value of				
	1						
						\le l <	[2]

15



Calculate the value of x.

16



(a) Write down the co-ordinates of point A.

**(b)** Plot point C at (7, -2).

[1]

(c) Write down the mathematical name of the triangle formed by joining the points A, B and C.

 . [	[]	l	1
L	_		J

17	AB is a straight line.

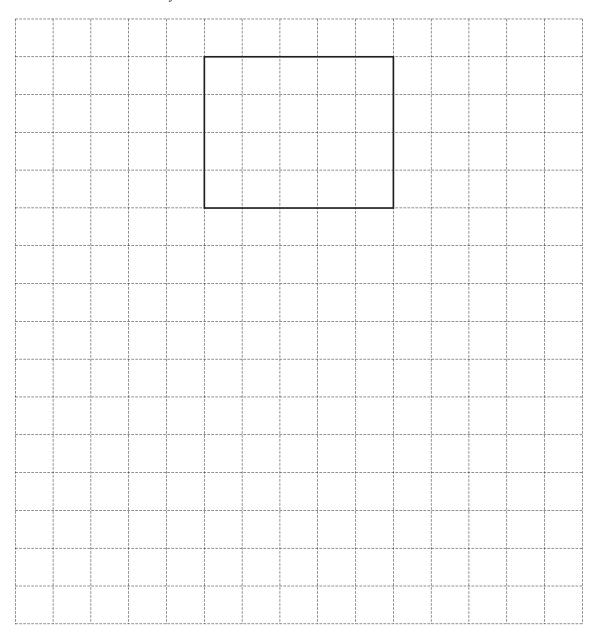
	$\overline{A}$	В
(a)	Measure the length of AB.	cm [1]
(b)	Mark the midpoint of $AB$ .	[1]
(c)	Draw a line perpendicular to $AB$ .	[1]

18 Find the size of the interior angle of a regular hexagon.

.....[3]

19 A cuboid measures 5 cm by 4 cm by 3 cm.

On the  $1\,\mathrm{cm}^2$  grid, draw an accurate net of this cuboid. One face has been drawn for you.



[3]

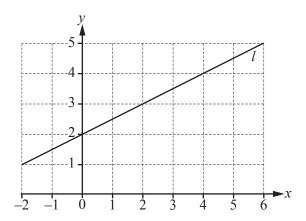
20 (a) Write  $\frac{11}{3}$  as a mixed number.

[1]
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(b) Without using a calculator, work out  $\frac{1}{4} + \frac{5}{12}$ . Show all the steps of your working and give your answer as a fraction in its lowest terms.

.....[2]

21

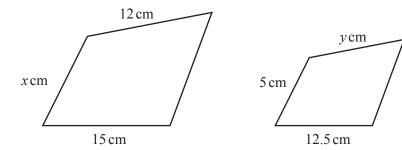


Find the equation of the line *l* in the form y = mx + c.

*y* = .....[3]

22	(a)	These are the first four terms	s of a seq	uence.			
			8	15	22	29	
		(i) Write down the next ten	rm.				
							[1
		(ii) Write down the rule for	r continui	ing the sec	quence.		
	(b)	These are the first four terms	s of a diff	ferent sequ	ience.		[1
			2	6	10	14	
		Find an expression for the m	th term of	f this sequ	ence.		
							[2
23	Sol	ve the equations.					
	(a)	7 - 3n = 11n + 2					
							ra
	<b>(b)</b>	$\frac{p-3}{5} = 3$					<i>n</i> =[2
	(D)	_5 - 3					
							<i>p</i> =[2

24



The two shapes are mathematically similar.

Find the value of

(a) x,

<i>x</i> =[	2
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**(b)** *y*.

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

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