

Cambridge International Examinations Cambridge International General Certificate of Secondary Education

	CANDIDATE NAME			
	CENTRE NUMBER		CANDIDATE NUMBER	
	MATHEMATICS			0580/11
	Paper 1 (Core)		October/November 2016	
	Candidates answer on the Question Paper.			1 hour
	Additional Material	ls: Electronic calculator Tracing paper (optional)	Geometrical instrumer	its

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 π , 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.

The syllabus is approved for use in England, Wales and Northern Ireland as a Cambridge International Level 1/Level 2 Certificate.

This document consists of 10 printed pages and 2 blank pages.



1	Write 30 000 000 in words.
	[1]
2	Write down the temperature which is $5 ^{\circ}$ C below $-2 ^{\circ}$ C.
	°C [1]
3	Write \$0.70 as a fraction of \$5.60, giving your answer in its lowest terms.
	[1]
4	Write 0.0401907 correct to
	(a) 3 significant figures,
	[1]
	(b) 3 decimal places.
	[1]

5 In triangle *ABC*, AB = 7 cm, BC = 4 cm and AC = 6 cm.

Using a ruler and compasses only, construct triangle *ABC*. The side *BC* has been drawn for you.



[2]

 $\frac{7}{12} \quad \sqrt{0.33} \quad 58\% \quad \frac{18}{31} \quad 0.59$ $\frac{18}{31} \quad 0.59 \quad (2)$ $\frac{18}{31} \quad 0.59 \quad (2)$ $\frac{18}{31} \quad 0.59 \quad (2)$ $\frac{18}{31} \quad 0.59 \quad (2)$

3

8 Work out $\frac{2}{3} - \frac{1}{4}$, giving your answer as a fraction in its lowest terms. Do not use a calculator and show all the steps of your working.

Write the following in order of size, smallest first.

6

.....[2]

9 A circular pool has radius 8 m.

Calculate the circumference of the pool.

..... m [2]

[2]

Calculate the original amount.

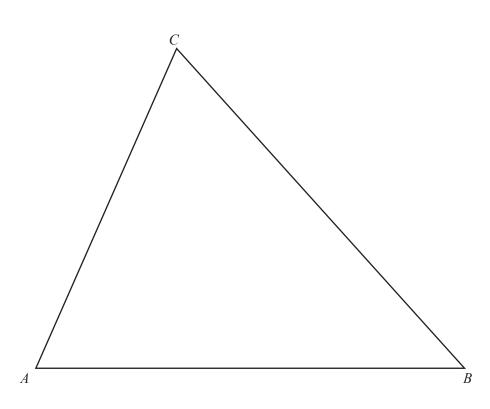
		[2]
11	ELEPHANT	
	Francesca chooses a letter at random from this word.	
	(a) Write down the letter she is most likely to choose.	
	(b) Write down the probability that she chooses the letter R.	[1]
		[1]
12	Write down the type of correlation there is between(a) the number of litres of fuel used by a car and the distance it travels,	
	(b) the test score of a student and their shoe size.	[1]
		[1]
13	Eleven children attempt to solve a puzzle. This list shows the number of attempts each child made.	
	7 6 8 5 6 5 7 8 3	8 1
	(a) Write down the mode.	
		[1]
	(b) Find the median.	
		[2]

14 Calculate.

(a)
$$\frac{4}{5}$$
 of 90
(b) $\frac{7.1 \times 4.8}{15.3 - 9.62}$ [1]
(c) $\sqrt[3]{4913}$ [1]

15 Solve the simultaneous equations. You must show all your working.

$$2x + 3y = 13$$
$$x + 2y = 9$$

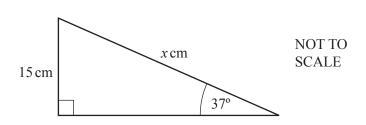


- (a) Construct the locus of points, inside the triangle, that are 5 cm from *B*. [1]
 (b) Construct the locus of points, inside the triangle, that are equidistant from *AB* and *BC*. [2]
 (c) Shade the region, inside the triangle, containing points that are

 more than 5 cm from *B*and
 - nearer to *AB* than to *BC*.

[1]

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Using trigonometry, calculate the value of x.

x =[3]

18 Find the *n*th term of each sequence.

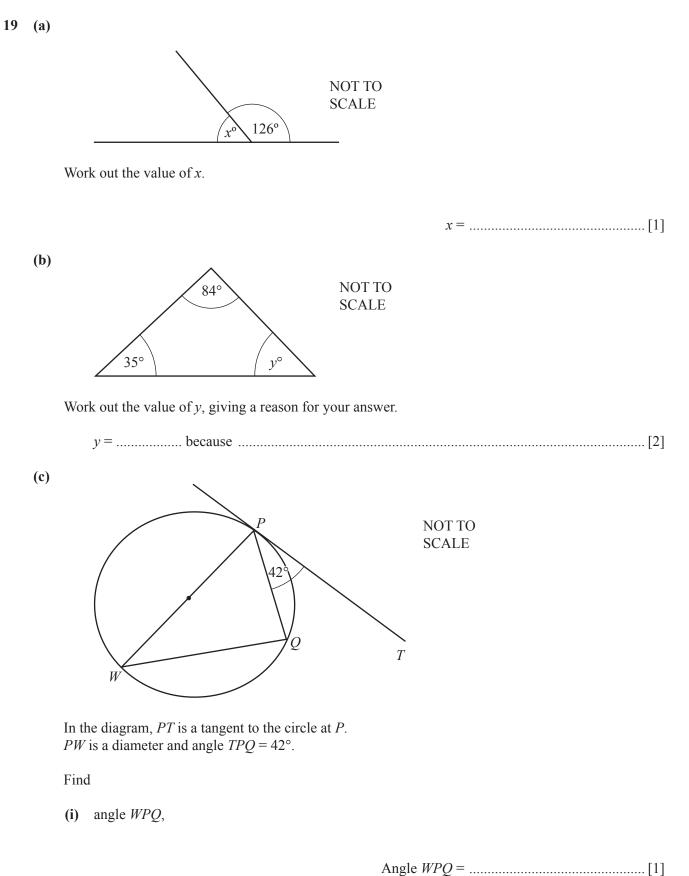
17

(a) 7, 13, 19, 25, 31, ...

.....[2]

(b) 9, 16, 25, 36, 49, ...

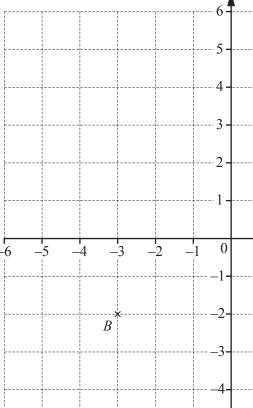
.....[2]



Aligie WFQ –

(ii) angle *PWQ*.

Angle *PWQ* =[1]



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

(.....) [1]

 $\overrightarrow{AB} = \left(\right)$

х

6

(.....) [1]

.....[1]

5

[Turn over

[1]

[1]

9

¦ A ¥-

2

1

-5

6

3

4

y

- 21 (a) Solve the equation.
 - 4x + 3 = 11

x =[2]

(b) Make *x* the subject of the formula $y = 4x^2 - 2$.

x =[3]

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