

Cambridge International Examinations

Cambridge International General Certificate of Secondary Education

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CENTRE CAND NUMBER NUMBER	IDATE BER
CANDIDATE NAME	

Candidates answer on the Question Paper.

Additional Materials: Electronic calculator Geometrical instruments

Tracing paper (optional)

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	worde
	wille	20 000 000	111	WOIGS

_		_	
	1	7	
	1	J	

2 Write down the temperature which is $5 \,^{\circ}$ C below $-2 \,^{\circ}$ C.

°C	Г1

3 Write \$0.70 as a fraction of \$5.60, giving your answer in its lowest terms.

	[1	1]		
--	----	---	--	--	--	---	--	--

4 Write 0.040 190 7 correct to

(a) 3 significant figures,

																									I	Г	1	1	
•									 								•								ı		J	ı	

(b) 3 decimal places.

																																					г	٠,	1	٦
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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]

6	Write the	following	in order o	of size	smallest	first
U	WITTE THE	10110 Willig	III Oraci C	n size,	Simulicst	mot.

$$\frac{7}{12}$$
 $\sqrt{0.33}$ 58% $\frac{18}{31}$ 0.59

7
$$\mathbf{a} = \begin{pmatrix} 5 \\ -6 \end{pmatrix}$$
 $\mathbf{b} = \begin{pmatrix} -2 \\ 4 \end{pmatrix}$

Work out $2\mathbf{a} - \mathbf{b}$.

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.

.....[2]

9 A circular pool has radius 8 m.

Calculate the circumference of the pool.

..... m [2]

10 $\frac{2}{9}$ of an amount is 48.

	Calculate	e the ori	ginal a	imoun	t.										
															[2]
11						Е	LΕ	ΡН	ΑN	Τ					
	Francesc	ca choos	es a le	tter at	randor	n fron	n this v	vord.							
	(a) Wri	ite down	the le	tter sh	e is m	ost lik	ely to	choose							
															F.4
	(b) Wai	:40 dossum	41	ان ملم ملم س	1:4 41	مامه	- l	a 41a a 1	otton D			•••••	•••••		[1]
	(b) Wri	ne down	i the pi	robabi	nty the	ii sne (cnoose	s the i	euer K	•					
															[1]
12	Write do	own the t	type of	corre	lation	there i	s betw	een							
	(a) the								distanc	e it tra	ivels,				
															[1]
	(b) the	test scor	re of a	studer	nt and	their s	hoe siz	ze.							
															F13
															[1]
13	Eleven c This list							ld mad	e						
	11110 1100					.p.u									
			7	6	8	5	6	5	7	8	3	8	1		
	(a) Wri	ite down	the m	ode.											
															[1]
	(b) Fin	d the me	edian.												
														•••••	[2]

(a)	$\frac{4}{5}$ of 90
()	5

																																																		_			_
																																																		ı	1		
•	•	•	•	•	•	•	٠.	•	•	•	•	•	•	•	•	•	•	•	•	 •	•	•	•	•	•	•	•	•	•	•	•	 •	•	•	•	•	•	•	•	•	 •	•	•	•	•	•	•	•	•	L	-	٠.	J

(b)
$$\frac{7.1 \times 4.8}{15.3 - 9.62}$$

[1

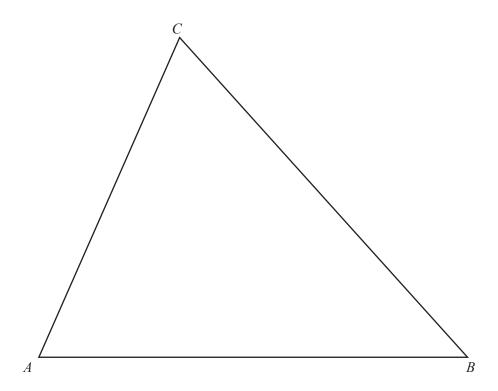
(c)
$$\sqrt[3]{4913}$$

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

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

$$y =$$
....[3]

16

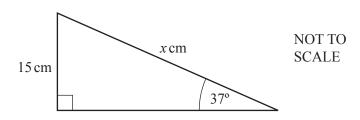


- (a) Construct the locus of points, inside the triangle, that are $5 \,\mathrm{cm}$ from B. [1]
- (b) Construct the locus of points, inside the triangle, that are equidistant from AB and BC. [2]
- (c) Shade the region, inside the triangle, containing points that are
 - more than 5 cm from B

and

• nearer to AB than to BC. [1]

17



Using trigonometry, calculate the value of x.

r =	I	[3]
$^{\lambda}$		9

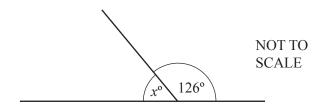
- **18** Find the *n*th term of each sequence.
 - (a) 7, 13, 19, 25, 31, ...

.....[2]

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

.....[2]

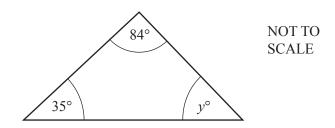
19 (a)



Work out the value of x.

 $x = \dots [1]$

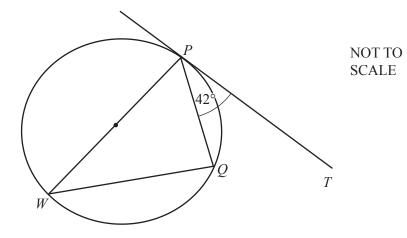
(b)



Work out the value of *y*, giving a reason for your answer.

 $y = \dots$ because \dots [2]

(c)



In the diagram, PT is a tangent to the circle at P. PW is a diameter and angle $TPQ = 42^{\circ}$.

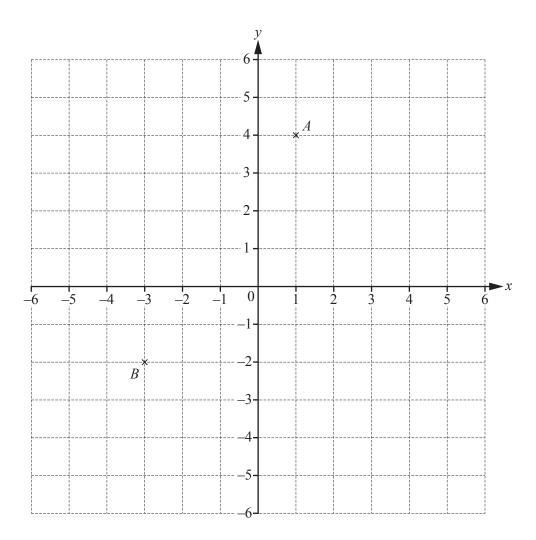
Find

(i) angle WPQ,

Angle *WPQ* =[1]

(ii) angle PWQ.

Angle *PWQ* =[1]



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

·			1	Γ1	Ι.	1
	,	•••••	,	Γ_1	Ι.	

(b) Plot the point (5, -2). Label this point C.

[1]

(c) Write down the mathematical name of triangle ABC.

......[1]

(d) Write \overrightarrow{AB} as a column vector.

$$\overrightarrow{AB} = \left(\begin{array}{c} \\ \end{array} \right)$$
 [1]

(e)
$$\overrightarrow{BD} = \begin{pmatrix} -2 \\ 5 \end{pmatrix}$$

Write down the co-ordinates of point D.

(.....) [1]

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

v	_															Γ')	1
л	_	 	 	 	 	 		 	 	 				 		L	_	ı

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

$$x =$$
 [3]

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