



Cambridge International Examinations

Cambridge International General Certificate of Secondary Education

CANDIDATE NAME			
CENTRE NUMBER		CANDIDATE NUMBER	
MATHEMATICS			0580/13
Paper 1 (Core)			May/June 2014
			1 hour
Candidates answer or	n the Question Paper.		
Additional Materials:	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 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.



1

-3°C 8°C -19°C 42°C -7°C

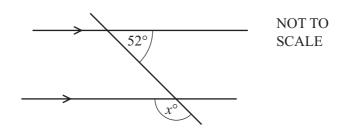
Write down the lowest temperature from this list.

Answer °C [1]

2 Change 6450 cm into metres.

Answer m [1]

3



In the diagram, a straight line intersects two parallel lines.

Find the value of x.

$$Answer x = \dots [1]$$

4 Calculate.

$$\frac{56.2 - 34.8}{-0.2}$$

Answer [1]

5 Write down the value of 7° .

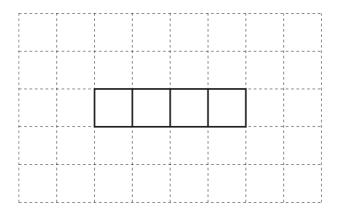
Answer [1]

6	Write	45 000	in star	dard	form
()	wille	4) () () ()	III SIAI	แเลเต	101111

Answer	 Г11
11.00,,0.	 1 * 1

7 Four faces of a cube are drawn on the grid.

Complete the net of this cube.



[1]

8 Write down all the prime numbers that are greater than 30 and less than 40.

1	F 2	1	-
Answer	 - 1	ı	

9

$$\mathbf{a} = \begin{pmatrix} -3\\4 \end{pmatrix} \qquad \qquad \mathbf{b} = \begin{pmatrix} 2\\6 \end{pmatrix}$$

Write each of the following as a single vector.

(a) 2a

Answer(a)
$$\left(\begin{array}{c} \end{array}\right)$$
 [1]

(b) a - b

Answer(b)
$$\left(\begin{array}{c} \\ \end{array}\right)$$
 [1]

10	(a)		1	4	8	12	27	40	
		Write down the nur	mber fron	n this lis	st which	is both a	cube nu	ımber an	d has a factor of 4.
							Ans	wer(a)	[1]
	(b)	1258 is a multiple of	of 34.						
		Write down a differ	ent multi	iple of 3	34 betwee	en 1200	and 130	0.	
							Ans	wer(b)	[1]
11				-3	-5	1	0	3	
	Thr	ree different numbers	from the	list are					st possible total.
		mplete the sum belov					C		•
				+		. +	:	=	
									[2]
12	The	e area of a square is 3	6 cm ² .						
	Cal	culate the perimeter	of this sq	uare.					
								Answer	cm [2]
13		e mean of five numbers are		nd 10.					
	Wo	rk out the number tha	at is miss	ing fror	n the list				
							1	Answer	[2]

14 Find the value of 3a - 5b when a = -4 and b = 2.

		Answer	[2]
15	Celine buys a bag of 24 tulip bulbs. There are 8 red bulbs and 5 white bulbs. All of the other bulbs are yellow.		
	Celine chooses a bulb at random from the bag.		
	(a) Write down the probability that the bulb is red or white	te.	
		Answer(a)	[1]
	(b) Write down the probability that the bulb is yellow.		
		Answer(b)	[1]
16	Find the fraction that is half-way between $\frac{1}{2}$ and $\frac{2}{3}$.		
		Answer	[2]

17 Using a straight edge and compasses only, construct the perpendicular bisector of AB. All construction arcs must be clearly shown.



[2]

18 Michelle sells ice cream.

The table shows how many of the different flavours she sells in one hour.

Flavour	Vanilla	Strawberry	Chocolate	Mango
Number sold	6	8	9	7

Michelle wants to show this information in a pie chart.

Calculate the sector angle for mango.

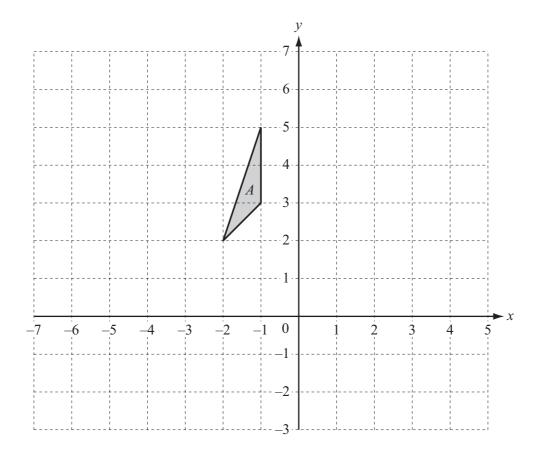
1	$\Gamma \cap I$	
Answer	 [2]	

19 Chris changes \$1350 into euros (\in) when \in 1 = \$1.313.

Calculate how much he receives.

Answer €.....[2]

20



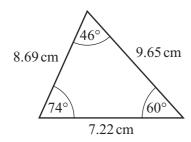
Draw the image of triangle A after a translation by the vector $\begin{pmatrix} 3 \\ -4 \end{pmatrix}$. [2]

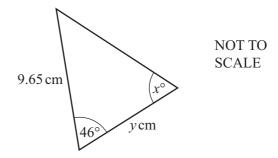
	21	Each exterior	angle	of a	regular	polygon	is	30°
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Work out the number of sides the polygon has.

Answer	 [2
Answer	 -[2

22





These two triangles are congruent. Write down the value of

(a) *x*,

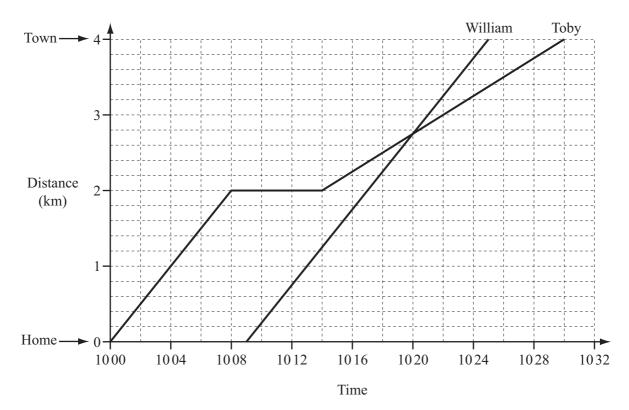
$$Answer(a) x =$$
 [1]

(b) *y*.

Answer(b)
$$y =$$
 [1]

23	Without using a calculator, work out Write down all the steps in your work			
			Answer	[3]
24	Solve the simultaneous equations.	2x + 3y = 29 $5x + y = 27$		
			$Answer x = \dots$	
			<i>y</i> =	[3]

25



Toby and William cycled into town. Their journeys are shown on the travel graph.

(a) For how many minutes did Toby stop on his journey into town?

Answer(a) min [1]

(b) Explain what happened at 1020.

(c) Work out how long William took to cycle into town.

Answer(c) min [1]

(d) Calculate William's speed in km/h.

Answer(d) km/h [2]

26	(a)	Factorise completely. $15a^3 - 5ab$		
	(b)	Simplify. $3x^2y^3 \times x^4y$	Answer(a)	[2]
	(c)	Multiply out the brackets and simplify.	Answer(b)	[2]
	(d)	Solve the equation. $8x + 9 = 3(x + 8)$	Answer(c)	[2]
			$Answer(d) x = \dots$	[3]

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