

Cambridge IGCSE[™] (9–1)

CANDIDATE NAME					
CENTRE NUMBER			CANDIDATE NUMBER		



MATHEMATICS 0980/01

Paper 1 (Core) For examination from 2020

SPECIMEN PAPER 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 [].

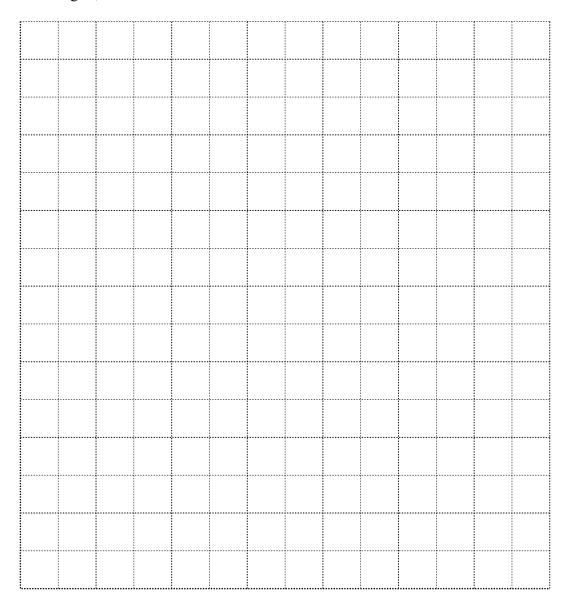
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1	Write sev	venteen the	ousand and	l seventee	en in figure	es.					
2	Find the	number of	`minutes f	rom 1758	s to 7.13 pr	n.					[1]
										miı	n [1]
3	The num	ber of cars	s parked in 129	a car par	k at 9 am i 132	s recorded	l for 10 d 127	ays. 107	118	114	
		e the stem-			132	120	127	107	110	114	
	-	the stem-									
	13										
	Key:	12 3 repres	sents 123 o	cars							[2]
4	(a) Writ	te 6789 co	rrect to the	e nearest 1	100.						
											[1]
	(b) Writ	te 6789 co	rrect to 3 s	significan	t figures.						
								•••••		•••••	[1]

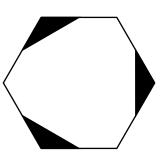
5 A cuboid measures 6 cm by 3 cm by 2 cm.

On this 1 cm² grid, draw a net of the cuboid.



[3]

6



(a) Write down the order of rotational symmetry of the shape.

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	1	ı

(b) Draw all the lines of symmetry on the shape.

[1]

7 (a) Write down a fraction which is equivalent to $\frac{3}{5}$.

[1	1
	1	ı

(b) Write down the reciprocal of 7.

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8 A cube has a volume of 1000 cm³.

Calculate the surface area of the cube.

9 Dan either walks or cycles to school.

The probability that he cycles to school is $\frac{1}{5}$.

(a) Write down the probability that Dan walks to school.

 [1]

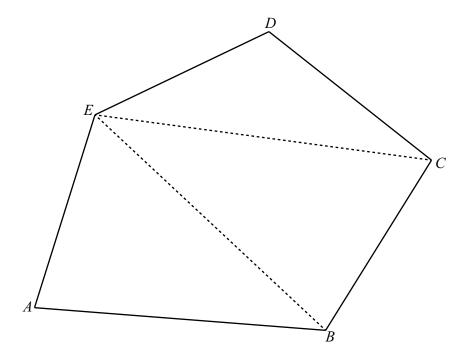
(b) There are 200 days in a school year.

Work out the expected number of days that Dan cycles to school in a school year.

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L	-

10	Using a ruler and pa Leave in your constru	air of compasses action arcs.	only, construct a tria	ingle with sides	5 cm, 8 cm and 10	cm.
						[2]
11	Here is a list of numb	pers.				
	Put a ring around the	number with the	largest value.			
	0.3030	$\frac{1}{3}$	0.0330	$\frac{3}{10}$	33%	[1]
12	Complete these states	nents.				
	(a) 6 m is the same 1	ength as	mm.			[1]
	(b) $7000 \mathrm{cm}^2$ is the s	same area as	m ² .			[1]

13



ABCDE is a pentagon.

	Explain why the diagram shows that the sum of the interior angles of a pentagon is 540° . Do not measure any angles.				
		[1]			
14	Simplify $x^3y^4 \times x^5y^3$.				
		[2]			
15	Write 2020 in standard form.				
		[1]			
16	Kim knows that one angle of an isosceles triangle is 48°. He says that one of the other angles must be 66°.				
	Explain why Kim is wrong.				

17	Explain v	vhy	$\sqrt{3}$	is	irrational.
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[1]			
	[1	l

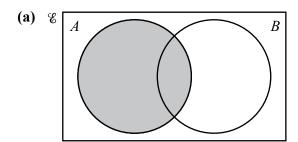
18 The mass, m kilograms, of a horse is 429 kg, correct to the nearest kilogram.

Complete this statement about the value of m.

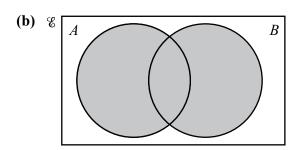
19 Rearrange the formula 5w - 3y + 7 = 0 to make w the subject.

$$w = \dots [2]$$

20 Use set notation to describe the shaded regions in each Venn diagram.







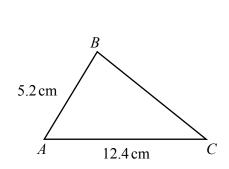
21	The	radius	of a	sphere	is	5.2 cm.
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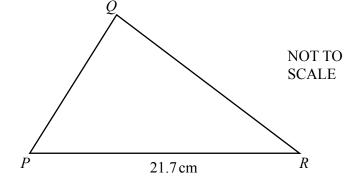
Work out the surface area of this sphere.

[The surface area, A, of a sphere with radius r is $A = 4\pi r^2$.]

.... cm² [2]

22 Triangle ABC is similar to triangle PQR.





Find PQ.

 $PQ = \dots$ cm [2]

23	$\mathscr{E} = \{ \text{children who go to the park} \}$ $T = \{ \text{children who play tennis} \}$ $G = \{ \text{children who play golf} \}$	
	120 children go to the park. 50 play tennis. 75 play golf. 25 do not play tennis or golf.	
	(a) Complete the Venn diagram.	
	$\mathscr{E} T $	2]
	(b) Find $n(T \cap G)$.	11
24	(a) Factorise completely $18x - 24$.	1]
	[1]
	(b) Simplify $(w^5)^4$.	
	[1]

25	Without using your calculator, work out $1\frac{7}{12} + \frac{13}{20}$.
	You must show all your working and give your answer as a mixed number in its simplest form.
	[3]
26	By rounding each number correct to 1 significant figure, estimate the value of $\sqrt{\frac{90006}{10.01^2}}$.
26	By rounding each number correct to 1 significant figure, estimate the value of $\sqrt{\frac{90006}{10.01^2}}$. You must show all your working.
26	
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26	You must show all your working.
26	You must show all your working.
26	You must show all your working.

27 (a) The *n*th term of a sequence is $n^3 - 5$.

Write down the first three terms of this sequence.



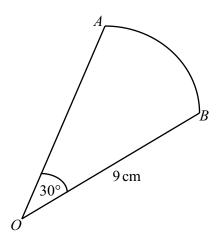
(b) Here is a sequence of numbers.

3, 6, 11, 18, 27, ...

Find an expression for the *n*th term of this sequence.

[2

28



NOT TO SCALE

OAB is a sector of a circle with radius 9 cm and centre O. The angle at O is 30°.

Calculate the area of this sector. Give your answer in terms of π .

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