

GCSE Mathematics

Foundation tier -- Paper2



For this paper you must have:

- □ calculator
- □ mathematical instrument



Morning

1 hour 30 minutes

Instructions

Use black ink or black ball-point pen.

Draw diagrams in pencil. Fill in the boxes at the bottom of this page. Answer all questions.

You must answer the questions in the spaces provided.

Do not write outside the box around each page or on blank pages.

Do all rough work in this book.

In all calculations, show clearly how you work out your answer.

Information

The marks for questions are shown in brackets.

The maximum mark for this paper is 80.

You may ask for more answer paper, graph paper and tracing paper.

These must be tagged securely to this answer book.

Advice

In all Calculations, show clearly how you workout your answer

Please write clearly, in block capitals, to allow character computer				
Centre number recognition. Candidate number				
Surname	_			
Forename(s)	_			
Candidate signature				
	_ /			

Do not write
outside the
box

		Answerall questions in the spaces provided.						
1	(a)	Which	of thes	se numbers	is a multi	ple of 6?		
		1	3	7	15	18	19	
								[1 mark]
				Answer _				
1	(b)	Which	numbe	er is four mo	ore than a	a square n	umber?	
		2	9	20		21	25	
								[1 mark]
				Answer _				

2 Match each expression on the left with the simplified expression on the right. box One has been done for you. [4 marks] 7a 4a + 5a 9a 14a - 7a 18a 4b x 4b 16b² 2 x 9a 5а 25a ÷ 5 20a Turn over for the next question

3	A gym has 400 members. 35% are bronze members. 25% are silver members. The rest are gold members. Work out the number of gold members.	[3 marks]
	Answer	

4 Lawn mower rental: Fuel: £30 per day 3-litre can £15 5-litre can £24 Tom wants to rent the lawn mower for 2 days and buy 8 litres of fuel for the mower. [3 marks] Work out the smallest total amount he could pay.

Turn over for the next question

Turn over ▶



Alan is looking at number machine problems. 5 (a) У +2 X - 6 He says, [1 mark] "If I know y I can work out x. I subtract 2 then I add 6." Does this method work? Give a reason for your answer. 5 (b) C x3+4 d He says, [1 mark] "If I know d I can work out c. I divide by 3, then subtract 4." Does this method work? Give a reason for your answer.

5 (c)	Solve 5x + 10 = 50	[2 marks]
	Answer	
5 (d)	Work out the value of $4r + 5t$ when $r = 20$ and $t = -5$	[2 marks]

6	Sam and N	Nicky each buy 320 tea	bags.		
		Small packs 80 tea bags for £1.50		Large packs 160 tea bags for £3.20	
	Com burgo	why omall pools			[4 marks]
		only small packs. s only large packs.			
		w much more than Sam	does Nicky p	pay?	
		Answer			



Do not write outside the box

7	(a)	Write the same	number in bot	h boxes to ma	ake the calc	culation correct

[1 mark]

7 (b) Solve
$$x = 5$$

[1 mark]

Answer _____

7 (c) Write a fraction in the box to make the calculation correct

[1 mark]

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			0
8	Eeshu has collected 450 coins for a charity fundraiser. Each coin is a 50p piece.		
	She decides to distribute the coins equally among 12 donation boxes at her She puts as many coins as possible in each box. How much money, in £, does Eeshu have left after filling all the boxes?	school.	
	How much money, In E, does lesnu have left after hilling all the boxes:		
		[4 marks]	
		-	
		-	
		-	
		-	
		_	
		_	
	Turn over for the next question		

Prepare 4 GCSGs

					[2 mai
_					
-					
9 (b)	Roannango v - v	– 7 to make x the s	uhiest Cirole	voun anewan	
0 (13)	roarrango y - X	TO MARO A UTO O	abjoot. On olo	your anower.	[1 mark]
	x = 7_	x = y+ 7	x = 7y	x = y - 7	
	У				

10 The sketch shows

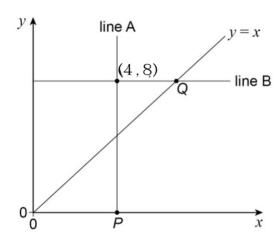
the line y = x

line A, which is vertical

line B, which is horizontal.

[2 marks]

The point (4,8) is on both line A and line B.



Write down the coordinates of P and $\, \, Q \,$.

P(_____, ____) Q (_____, ____

Turn over for the next question

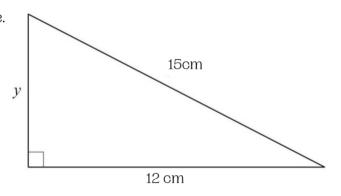


11 (a) A group of friends decides to rent a van for a weekend		A group of friends decides to rent a van for a weekend trip.
		The total cost of renting the van is £240.
		If there are 8 friends in the group, work out the cost per person.

[2 marks]

Answer £ ___

11 (b) Here is a triangle.



[3 marks]

Use Pythagoras' theorem to work out the value of y Give your answer as a decimal.

Answer

Jack and James go to the cinema. Here is the price list.

Ticket	£ 3.50
lce cream	£ 4.20
Pop corn	£ 1.90
Drink	£ 1. 50
Crisps	£ 1.50

Jack and James buy	y a ticket each.
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[3 marks]

Jack has popcorn and a drink.

James has Ice cream and a crisps.

They pay together with a £20 note.

How much change do they get?

Answer

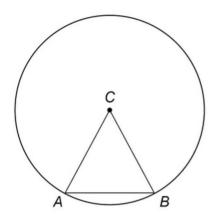
3 (a)	The volume of this cuboid is $220cm$.	
	Work out the length of the cuboid.	
	5cm 11cm	[2 marks
13 ((b) Work out the surface area of the cuboid.	[2 marks
	Answer	

14 (a)	Write down all the cube numbers between 50 and 300	[2 marks]	01
14 (4)	With devit difference of the first section of the deco		
	Answer		
14 (b)	2y = 7x Which statement is correct? Tick one box.	[1 mark]	
	y is 315% of x		
	y is 350% of x		
	x is 250% of y		
	x is 400% of y		
	Turn over for the next question		-

15 (a) Matilda and Ellis decide to meet between their two houses.	[2 marks]	
The meeting place is 27 miles from Matilda's house and 39 km from Ellis's house.		
Use 8 km = 5 miles to decide which of the following statements is true.		
Ellis lives closer to the meeting point than Matilda		
Matilda lives closer to the meeting point than Ellis		
Ellis and Matilda live the same distance from the meeting point		
15 (b) In a school library, the books are either fiction or non-fiction. The ratio of fiction books to non-fiction books is 7 : 13.	[2 marks]	
What percentage of the books are non-fiction?		
	_	
	_	
Answer		



A and B are points on a circle. C is the centre of the circle.



Not drawn accurately

Tick one box for each statement.

[3 marks]

	Definitely true	Might be true	Cannot be true
Line AB is a tangent to the circle			
AC is an arc of the circle			
Triangle ABC is equilateral			

Turn over for the next question

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17	How many hours are there in 6 days? Circle your answe		swer	[1 mark]	
	54	92	144	122	
18	Factorise fully 25x	+ 100			[2 marks]
19	Answ The masses of some The smallest mass wa The range of the mas	Kittens were rec as 4 kilograms 5	00 grams.		[2 marks]
	What was the larges		nd grams.		
	Answe	gr			

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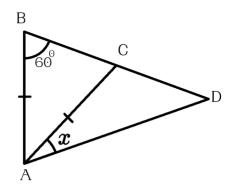
Θ	Isabelle buys pet food in 3.5. kg packs. Her pet needs 0.8 kg of food each week. She wants to have enough food for the next 12 weeks. She already has two 1.3 kg packs. Work out the smallest number of packs she needs to buy. You must show your working	
		[4 marks]
	Answer	

21	James gets paid £12.30 per hour. On Monday he starts work at 09 15 and finishes at 16 30.	[2 marks]
21 (a)	How much does James get paid on Monday?	
	Answer	
	It takes James 15 minutes to walk to the bus station.	
	He gets off the bus at Kingfisher Close and it then takes him 5 minute	s to walk
	home.	
	Here is a section of the bus timetable.	
	Bus station Kingfisher Close	
	16 45 16 55	
	17: 00 17: 10	
	17:15 17:25	[3 marks]
21 (b)	What is the earliest James could arrive home on Monday?	
	Арацион	
	Answer	



[3 marks]

Angle ABD = 60° .

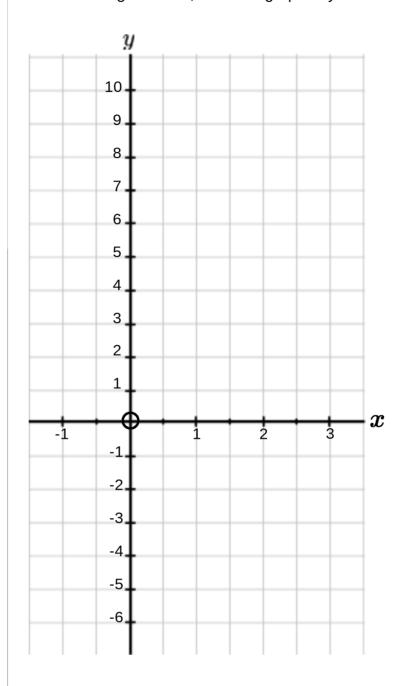


Work out the size of angle x.

Answer

Turn over for the next question

On the grid below, draw the graph of y = 4x - 2 for values of x from -1 to 3.



[3 marks]

		outside box
24	8 cakes cost £16.80. Work out the cost of 12 of these cakes	[2 marks]
	Answer	-
1	25 Work out the value of a^2 4a when $a = 10$	[2 marks]
	_	
	Answer	
	END OF QUESTIONS	$\left \left \frac{1}{7} \right \right $