

AQA Mock Test Papers Paper1-Test1

GCSE Mathematics

Foundation tier -- Paper1



You must not use a calculator For this paper you must have:

□ mathematical instruments.

☐ Formula sheet (enclosed)



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

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 signa	ature				

Answer all questions in the spaces provided.	Answer a	questions	in the spaces	provided.
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How many centimetres are there in 4.2 metres? Circle your answer

[1 mark]

0.042

0.42

42

420

2 Circle the fraction that is not equivalent to $\frac{2}{9}$

[1 mark]

4/18

6/27

8/36

10/27

3 Simplify 6a-(2a+8). Circle your answer

[1 mark]

6a+8

4a

4a-8

-4a

4 a) Solve x - 6 = 20; Find the value of x Answer	[1 mark]
4 b) Solve 5y = 50; Find the value of y	[1 mark]
Answer	
4 c) Solve 6+Z =12; Find the value of Z	[1 mark]
Answer	

Turn over for the next question

6

5			Red yellow and green balls are put in a bag. The probability of taking out each colour of ball is given in the table.			
			Red 0.1	Yellow 0.3	Green	
5	(a)	Calculate the	probability of taking ou	ıt a green ball.		[1 mark]
		Allswei		_		
5	(b)	which colour i	is the most likely to be	taken out?		[1 mark]
		Ar	nswer			
	5 (c)		oalls in the bag. How n			[1 mark]
			Answer			_

6	White paint costs £2.80 per litre. Red paint cost £3.50 per litre. White paint and red paint are mixed in the ratio 3:2. Workout the cost of 18 litres of the mixture.		
		[4 marks]	
	Answer £		
	Here are three expressions. b/a ab a-b when $a = 4$ and $b = -8$ which expression has the smallest value? you must show your working.		
		[2 marks]	
	Answer		

8	(a)) Here are some properties of numbers.	
		A Even	
		B Odd	
		C Square	
		D Prime	
		E Two - digit	
		which two properties does the number 10 have? circle the correct letters.	
		A B C D E	
		Answer	
			[1 mark]
8	(b)	c) Can one number have all of the properties? Tick a box [2]	marks]
		Yes No Cannot tell	
		Yes No Cannot tell	
		Give a reason for your answer.	
		Answer	
		Allswei	
			-

9	Workout 50% of 500	box
		[1 mark]
	Answer —————	
10	Here is a calculation.	
	$456 \times 30 = 13\ 680$ Use the calculation to help answer the following questions.	
10 (a)	Write down the answer to 13680÷ 456	[1 mark]
	Answer	
10 (k	o) Circle the answer to 512 × 20	[1 mark]
	10240 1240 1024 1	L2040

AB, C and D are junctions on a motorway.	Not drawn accurately
A B	C D
distance $CD = 3 \times \text{distance } AB$ distance $BC = 25 \text{ miles}$	
Bethany drives from <i>A</i> to <i>C</i> . She drives for 30 minutes at an average speed of 6 Work out the distance <i>AD</i> .	62 miles per hour.
	[4 marks]
Answer	miles

a)	Workout 9879 ÷ 11	[2 marks]
	Answer	
b)		
υ,	Workout $\frac{5}{6} + \frac{2}{7}$	[3 marks]
	Answer	

13 (a)	write the first three terms of the sequence whose $\ nth\ term\ is\ n^2$ - $\ 1$	[2 marks]
,		
3 (b)	Find an expression for the nth term of the sequence which starts 13, 16,19,2	22,25.
		[2]
		[2 marks

14 a) Complete the table of values for $y = x^2$

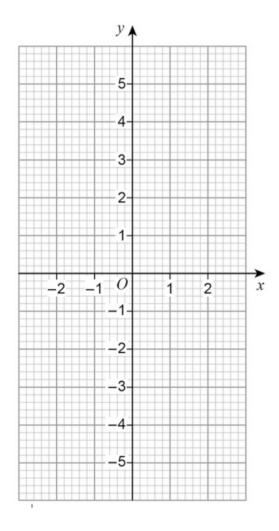
[1 mark

mark]	Do not write
ilialik]	outside the

Х	-2	-1	0	1	2
У					

b) Draw the graph of $y = x^2$ for values of x from -2 to 2

[2 marks]



14 c) Use your graph to estimate the value of $\sqrt{2.6}\,$

[2 marks]

Answer

9

Turn over ▶

b) Simplify m ³ [1 c) Simplify 8 x 2 x 2 . Give your answer as a power of 2 [2				[] r
c) Simplify $8 \times 2 \times 2$. Give your answer as a power of 2 [2	c) Simplify $8 \times 2 \times 2$. Give your answer as a power of 2 [2	b) Simp	olify_m³_m°	[1
		c) Simpl	ify $8 \times 2 \times 2$. Give your answer as a power of 2	[2

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hox

16	Solve $\frac{2w}{15} = \frac{8}{5}$	[2 marks]
	w=	
17 a)	Estimate -√61	[1 mark]
17 b)	Calculate 20% of 60	[2 marks]
		[

17 c)	Calculate 2 of 50 5	[2 marks]
18 Ca	Iculate the value of p. Give a reason for your answer.	[3 marks]

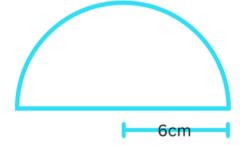
		3	5	
19	Workout 2		x 1	Give your answer as a mixed number in it's simplest form
		4	7	

[3 marks]

The diagram shows a semicircle of radius 6 cms.

[2 marks]

Workout the area of semi-circle. Give your answer in terms of $\boldsymbol{\pi}$

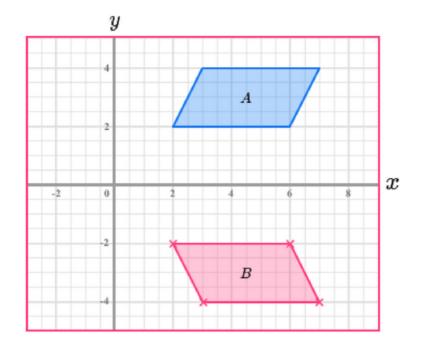


Turn over ▶

10

21 Describe fully the single transformation that maps shape A onto shape B.

[2 marks]





Find the modal class, the class interval in which the median lies and the estimated mean from this grouped frequency table

Speed x mph	Frequency
40 ≤t < 50	4
50 ≤t < 60	8
60 ≤t < 70	10
70 ≤t < 80	3

a)	Workout	an	estimate	for the	mean	number	of m	nph
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[3 marks]

Answer

Turn over for the next question

5

2 b) modal class	[1 mark]
	!
	.4
2 c) Median	[1 mark]

		Do not write outside the box
23	Write 100 as a product of prime factors.	DOX
	Give your answer in index form.	
	[3 marks]	
	_	
	Answer	
	Allswei	
	. 2	
24	Factorise $x^2 + 7x + 10$ [2 marks]	
	Answer	
		7

25	In a	group	of 98	students
23	III a	SIOUP	01 /0	Students

25 study both French and D $\&\,T$

10 study D & T but do not study French

41 study French.

Marcus draws this venn diagram to represent the information.

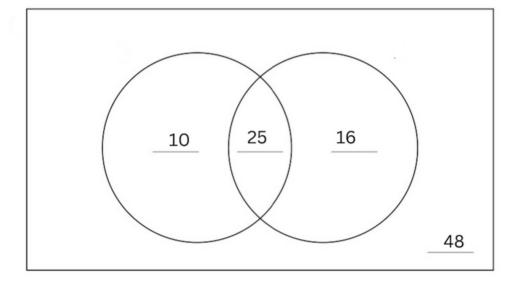
 ξ =the group of 98 students

[2 marks]

A =the students who study D & T

F = the students who study French

ξ



Μ	lake	two	criti	cisms	of	his	diagram
---	------	-----	-------	-------	----	-----	---------

criticism	1		

criticism 2

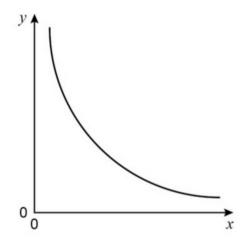
The ratio of cats to dogs in a pet shelter is 3:2. 26

If there are 18 cats, how many dogs are there?

[2 marks]

Answer

Here is a sketch of a graph.



Circle the equation of the graph.

k is a constant.

[1 mark]

$$v = kx$$

$$y = k + x$$

$$y = k - x$$

$$y = kx$$
 $y = k + x$ $y = k - x$ $y = \frac{k}{x}$

Turn over for the next question

		[2 marks]
9 J	essica tries to work out 15.62 + 64.75 + 12.49	[3 marks]
	Her answer is 45.28	
	By rounding each number to the nearest 10, show that her answer i	s incorrect.
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