

First Name	
Last Name	
Date	
Total Marks	/ 100 marks

MathsMadeEasy

GCSE Mathematics
Non Calculator
Foundation Tier
Mock 2, paper 1
1 hour 45 minutes



Instructions

Write your name and other details in the boxes above.
Answer all the questions
Take π to be 3.142

Information

Marks are shown in brackets for each question (2)
Calculators may not be used

Advice

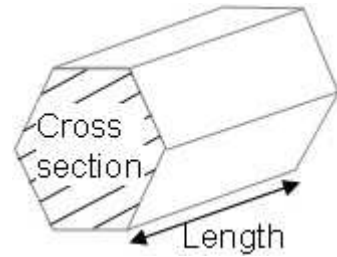
Don't spend too long on one question
Show all your working in calculations for full marks
You will get marks for method even if your answer is incorrect
Leave a question until later if you cannot answer it

Materials needed for examination

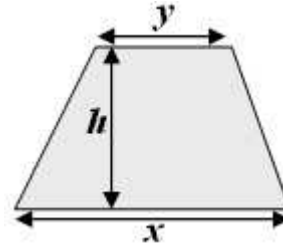
Ruler marked in centimetres and millimetres,
protractor, compasses, pen, pencil, rubber
Tracing paper may be used

Formulae Sheet Foundation Tier

Volume of prism = area of cross section \times length



Area of trapezium = $\frac{1}{2}(x + y)h$



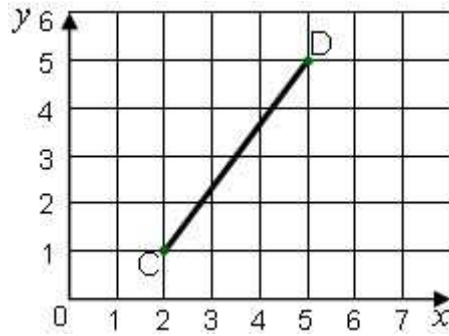
Authors Note

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1.



(a) Write down the coordinates of the point

(i) **C** (..... ,)

(ii) **D** (..... ,)

(2)

(b) On the grid, mark with a cross (×) the midpoint of the line *CD*

(1)

2. (a) Write the number **twelve thousand, six hundred and ninety-four** in figures.

..... (1)

(b) Write down the value of the 6 in the number 746 824

..... (1)

(c) Write the number 5173 correct to the nearest hundred.

..... (1)

3. There were some marbles in a bag.

Luke took 19 out and Harry put 17 back.

Now there are 40 marbles left in the bag.

How many were there to start with

..... (2)

4. Here are the first five terms of a number sequence.

180 174 168 162 156


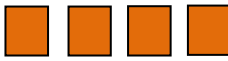


Write down the next two terms of the number sequence.


..... ,

(1)

5. Look at the pictogram.

It shows how many pies were sold in a shop during some weekdays.

Monday	
Tuesday	
Wednesday	
Thursday	

Key  = 8 pies sold

a) Which day do you think was half day closing?

.....

(1)

b) How many pies were sold on Thursday

.....

(1)

c) Pies cost £2.50 each.
Look at the sales on Wednesday. What was the value of the pies sold

.....

(2)

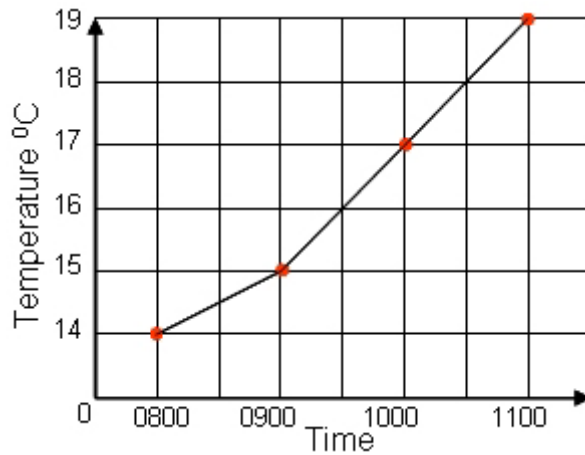
6. The table shows the temperature at midday on each day of a week .

(a) Work out the median temperature.

Day	Mon	Tue	Wed	Thur	Fri	Sat	Sun
Temperature	20	21	23	24	25	23	22

.....°C (2)

(b) The graph shows the temperature from 0800 to 1100 during one day.



(b) What was the temperature at 0900?

.....°C (1)

(c) What was the temperature at 1100?

.....°C (1)

7. Here are five numbered counters:



a) What is the mode of these numbers

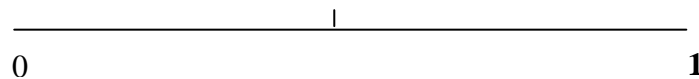
..... (1)

b) What is the mean of these numbers

..... (2)

The counters were placed in a bag and Matt took one out without looking

c) On the probability scale, mark with a cross (×) the probability that he will take a counter with the number 13.



(1)

8. Work out

a) $4 - 2 \div \frac{1}{2} + 1$

..... (1)

b) 243×37

..... (2)

9. A gardener planted five different types of vegetable seeds.
The table shows in which months the vegetables were ready to eat.

		Month					
		July	August	Sept	Oct	Nov	Dec
Type of seed	Beetroot	✓	✓	✓	✓	✓	
	Broccoli		✓	✓			
	Sprouts				✓	✓	✓
	Carrots	✓	✓	✓	✓		
	Runner Bean			✓			

- (a) In which months are Broccoli ready to eat?
..... (1)
- (b) In which month are most vegetables ready to eat?
..... (1)
- (c) Which vegetables are ready in the same month as sprouts?
..... (1)

10. Laura drove to her mum's house.
She expected to arrived by 14 40
But the motorway had a traffic jam and she was 1 hour 30 minutes late.

- a) At what time did get to her mum's house.
..... (1)

It took Laura 2 hours to get to her mum's house and the distance was 44 miles.

- b) What was her average speed in miles per hour.
..... (1)

- 11.** (a) Complete the table by writing a sensible metric unit on each dotted line.
The first one has been done for you.

The distance from London to Grimsby	285 kilometres
The volume of milk in a glass	320.....
The height of a man	180
The weight of a ten pence coin	9

(3)

- (b) Change 8 kilograms to grams.

.....g

(1)

- 12.** The table can be used to convert pounds (£) to Euros (€)

Pounds (£)	Euros (€)
0.10	0.14
0.20	0.28
0.50	0.70
1.00	1.40
2.00	2.80

- (a) Change £3 to Euros (€).

(€).....

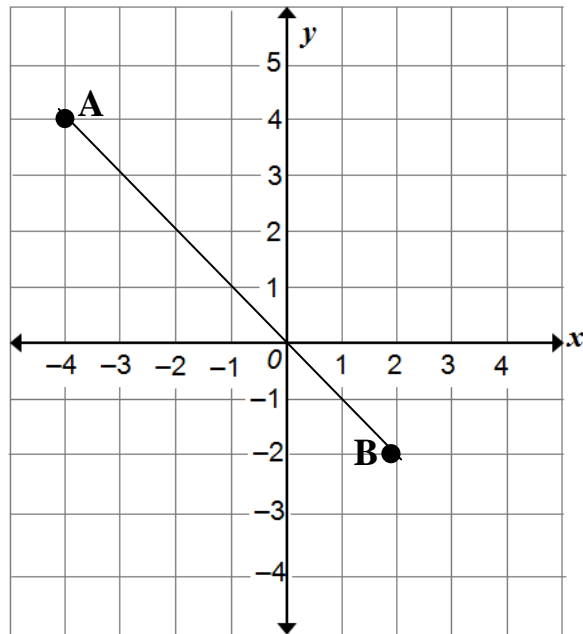
(1)

- (b) Change €2.10 to pounds (£)

(£).....

(1)

13.



a) Write down the co-ordinates of point

i) A

(.....,) (1)

ii) B

(.....,) (1)

b) Write down the co-ordinates of midpoint of the line AB

(.....,) (1)

14. Here is a list of 8 numbers.

8 12 25 32 49 55 60 80

(a) Write down **two** numbers from the list with a sum of 81

..... , (1)

(b) Write down a number from the list which is

(i) a multiple of 6

.....

(ii) a square number.

..... (2)

(c) Use a word from the box to complete this sentence correctly.

product	Cube	factor	multiple
---------	------	--------	----------

12 is a of 60

(1)

36 88 33 11
28 81 69 39

(d) From the numbers above write down a number which has

(i) exactly **one** line of symmetry,

..... (1)

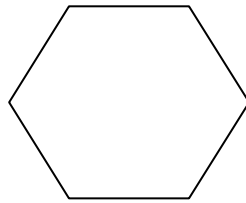
(ii) 2 lines of symmetry **and** rotational symmetry of order 2,

..... (1)

(iii) rotational symmetry of order 2 but **no** lines of symmetry

..... (1)

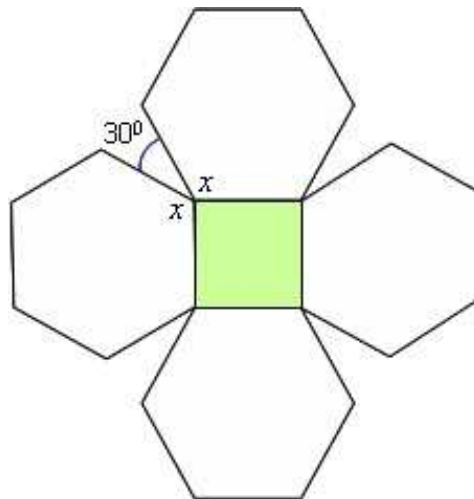
15. The diagram shows a shape.
The shape is a 6-sided polygon.
(a) Write down the mathematical name for a 6-sided polygon.



.....

(1)

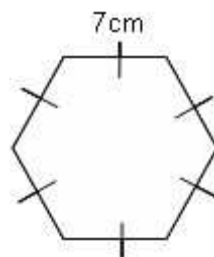
The diagram below shows how four of the shapes fit round a square. An angle of 30° is shown.



The size of each of the angles marked x is 120°
(b) Give reasons why.

.....
.....
.....

(2)



The diagram shows the lengths of one of the sides of the shape.
(c) Work out the perimeter of the shape.

.....cm

(2)

16. A supermarket gave some vouchers to its customers.

The supermarket used the rule below to work out the value of the vouchers for each customer.

Find 25% of the amount spent
Then round this **up** to the next whole number of pounds
This is the value of the voucher

Jane spent £34.32 at the supermarket

a) What is 25% as a fraction (1)

b) Work out 25% of £34.32 £..... (2)

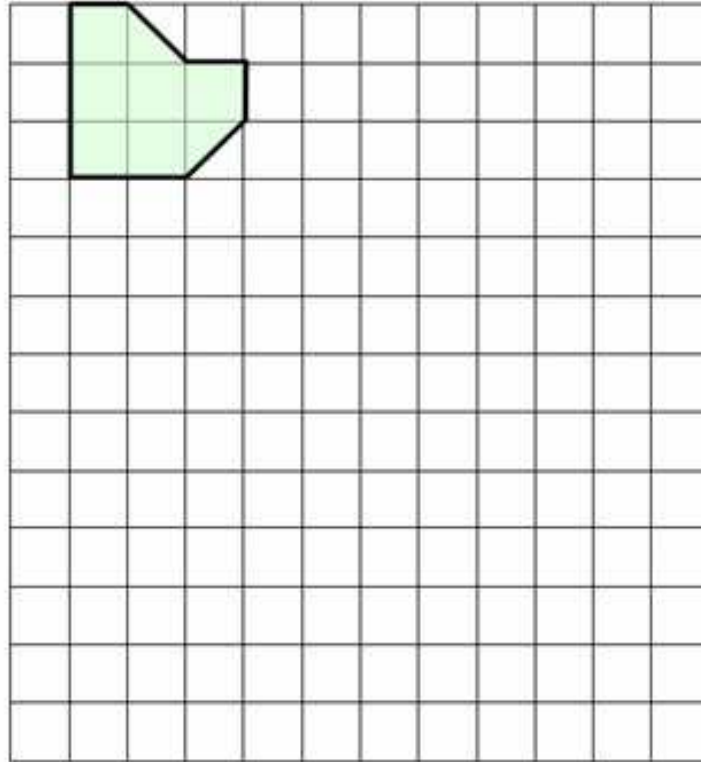
c) How much was Jane's voucher worth. £..... (1)

17. A shape has been drawn on a grid of one centimetre squares.
(a) Work out the area of the shape.

..... cm²

(2)

- (b) On the grid, enlarge the shape with a scale factor of 3.



(2)

18. a) Simplify $9x + 7q - 4x + 3q$
..... (2)
- b) Simplify $5s + 7y - 6s - 6y$
..... (2)
- c) Simplify $6x^2 - 4x^2$
..... (1)
- d) Expand $y(y^3 - 3y)$
..... (2)
- e) $-3 \leq y < 2$
Write down the integer values of y
..... (1)
- f) Solve $5 - 7a = 3a - 3$

a = (2)
- g) Factorise $7y + 21$
..... (1)

19. a) Work out $3\frac{2}{3} \div 1\frac{1}{2}$

..... (2)

b) Work out $3\frac{2}{3} \times 2\frac{1}{4}$

Give your answer in its simplest form

..... (2)

20

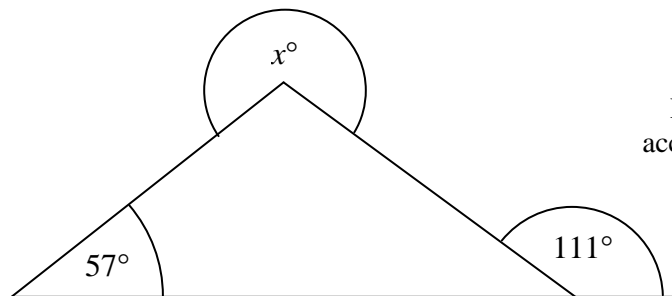


Diagram **NOT** accurately drawn

Work out the value of x .

$x =$ (3)

- 21.** Sylvia had to cancel her holiday and paid a cancellation charge. The cancellation charge depends on the number of days before the departure date that the holiday is cancelled and it is a percentage of the cost of the holiday.

The table shows the percentages.

Number of days before the departure date the customer cancels the holiday	Percentage of the cost of the holiday
over 28 days	40%
22–28	60%
15–21	80%
4–14	90%
3 or less	100%

The cost of Sylvia’s holiday was £1240. She cancelled her holiday 24 days before the departure date.

How much was her cancellation charge .

£..... (2)

- 22.** Here are the ingredients needed to make 6 pancakes

150 g flour
120 ml milk
3 large eggs
25 gm lard
Pinch salt

- (a) Work out the amount of flour needed to make 15 pancakes.g. (2)

- (b) Work out the amount of milk needed to make nine pancakes.ml (2)

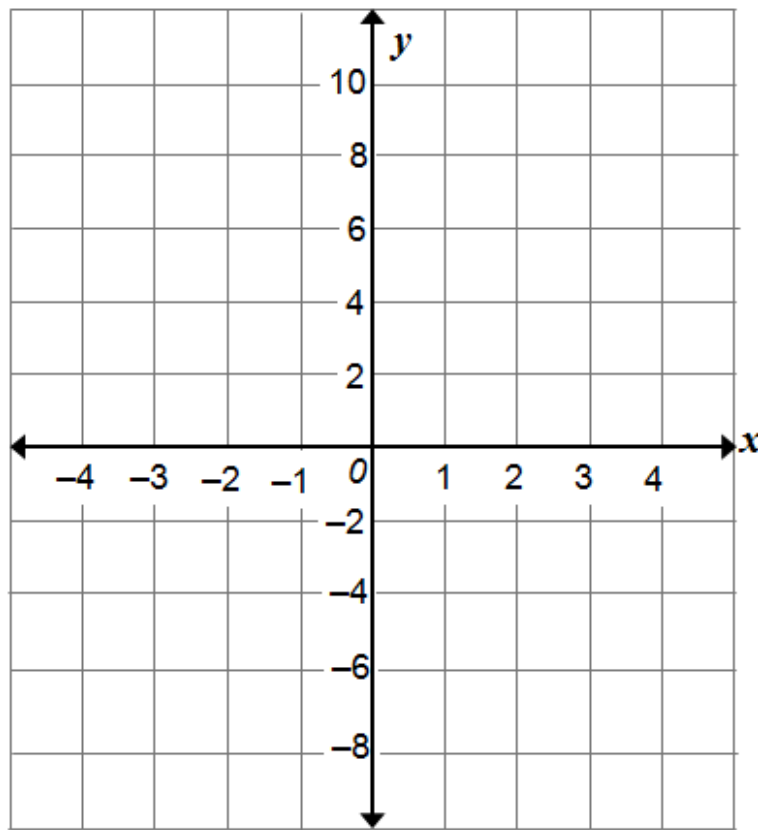
23. Complete this table of values for $y = 2 - 3x$

(2)

x	-3	-2	-1	0	1	2
y	11		5		-1	

On the grid draw the graph of $y = 2 - 3x$

(2)



- 23.** A school had 200 pupils in Year 11.
Each pupil needed a copy of a Maths, English and Science text book.

Book	In stock now	Cost per book
Maths	140	£1.25
English	80	£2
Science	200	£3

A 25% discount was given for any book where more than 100 copies were ordered.

What was the total cost of the book order the school needed to make.

..... **(4)**

24. a) Express 48 and 60 as a product of their prime factors by drawing a prime factor tree

..... **(3)**

b) What is the highest common factor of 48 and 60

..... **(1)**

25. Estimate the following:

$$\frac{476}{2.3 \times 10.1}$$

..... **(2)**

26. Cyril had a 6 sided dice and a spinner marked with the numbers 1 to 5.
He threw the dice and spun the spinner once and added up the two scores to get a total.
What is the probability of getting a total score of 8 or more.

..... (2)

Now Cyril threw the dice and spun the spinner 90 times.
Work out an estimate for the number of times he gets a total score of exactly 8.

..... (2)