

Year 8

Mathematics

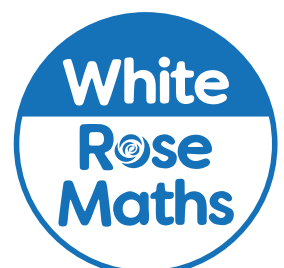
Higher: No calculator allowed

Time allowed: 45 minutes

First name						
Middle name						
Last name						
Date of birth	Day		Month		Year	
Teacher						

This assessment has been designed by White Rose Maths.

For more information, please visit www.whiterosemaths.com



1

Brett and Esther share some sweets in the ratio 5 : 2

Brett gets 15 more sweets than Esther.

How many sweets does Esther get?

2 marks

2

A cake has a radius of 10 cm.

Will a 60 cm ribbon be long enough to go around the edge of the cake?

Circle your answer.

Yes

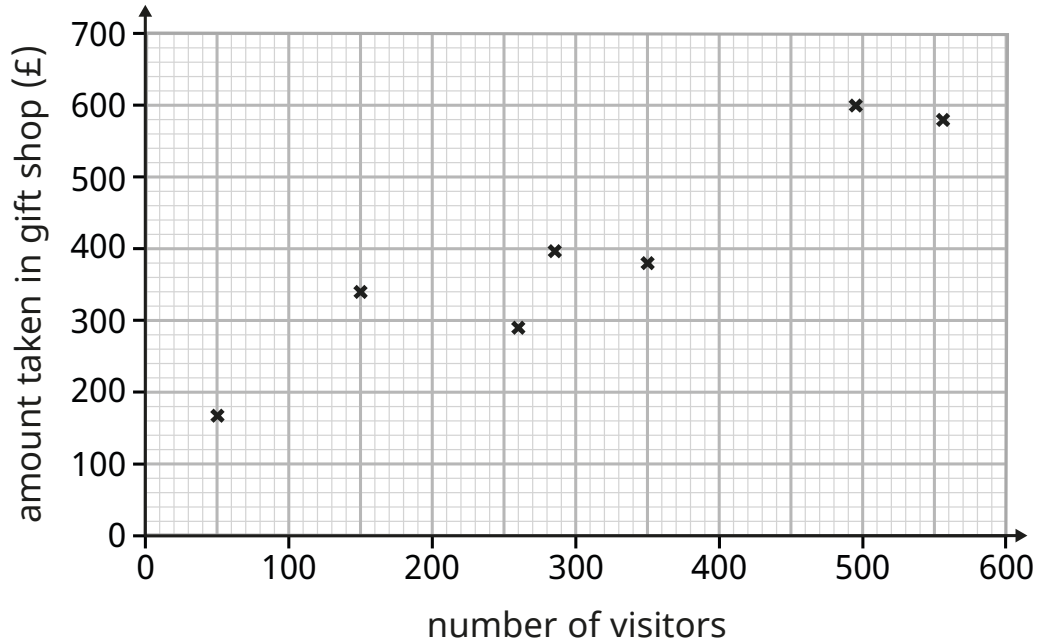
No

Explain how you know.

2 marks

3

The scatter graph shows the number of visitors to a museum and the amount of money taken in the museum's gift shop every day for a week.



What type of correlation does the scatter graph show?

1 mark

The museum manager says, "All visitors to the museum spent at least £1 in the gift shop."

Explain why this might not be the case.

1 mark

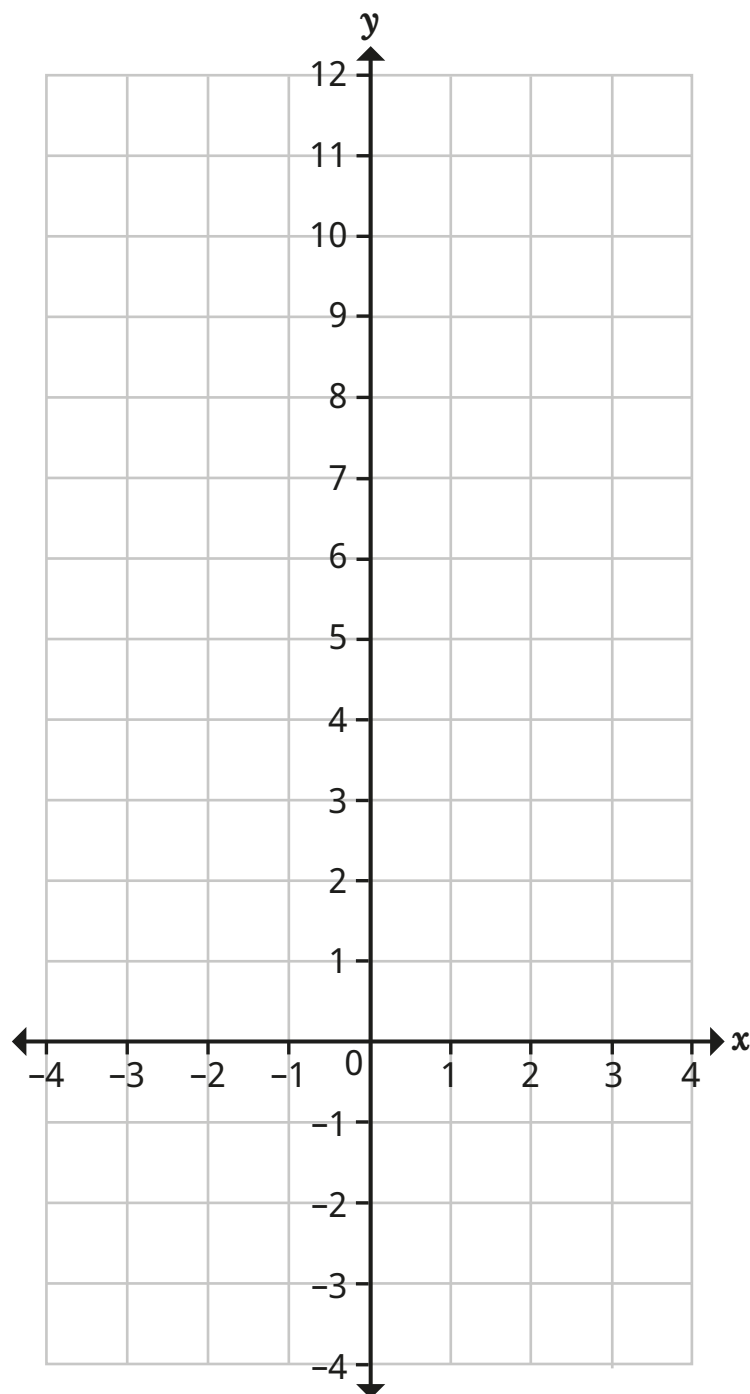
4

Complete the table of values for the line $y = 5 - 2x$.

x	-2	-1	0	1	2	3
y		7	5			-1

2 marks

Draw the line $y = 5 - 2x$ on the grid for values of x from -2 to 3



2 marks

5

In a recipe, you need 200 g of flour to make 8 cakes.

Rosie has 480 g of flour.

What is the greatest number of cakes Rosie can make?

2 marks

6

A spinner shows four colours: red, green, yellow and blue.

The table shows some of the results when a spinner is spun 60 times.

Colour	red	green	yellow	blue
Frequency	27	15		

The spinner lands on yellow twice as many times as it lands on blue.

Complete the table.

2 marks

Estimate the probability that the spinner lands on red.

1 mark

7

Dani records the time taken to score the first goal in each football match played by her favourite team over several seasons. The results are shown in the frequency table.

Time, t (minutes)	Frequency
$0 < t \leq 20$	41
$20 < t \leq 40$	54
$40 < t \leq 60$	70
$60 < t \leq 80$	27
$80 < t \leq 100$	8

In how many matches was the first goal scored after an hour of playing time?

1 mark

In what percentage of the matches was the first goal scored between 20 and 40 minutes into the game?

 %

2 marks

8

Eva is $2\frac{1}{2}$ years old.

Jack is 9 months old.

Write the ratio of Eva's age to Jack's age in its simplest form.

2 marks

Eva weighs 12 kg.

Jack weighs 9 kg.

Write the ratio of Eva's mass to Jack's mass in the form 1 : n.

2 marks

9

Which of these equations will not produce a linear graph?

Circle your answers.

$y = x$

$y = \frac{1}{x}$

$y = x^2$

$y = -x^2$

$y = -x$

2 marks**10**

£1 = 28 Mexican pesos

A shirt costs £22

How much does the shirt cost in Mexican pesos?

pesos

2 marks

In Mexico, the same shirt costs 900 Mexican pesos.

Estimate the cost of the shirt in pounds (£).

You must show your working.

£

2 marks

11

A builder is building a wall.

He uses 400 bricks to build 5 m of the wall.

The wall will be 9 m long when finished.

How many more bricks does the builder need?



2 marks

12

How many pieces of wood $\frac{2}{5}$ foot long can be cut from a piece of wood measuring 4 feet long?



2 marks

13

An Airbus A340 is 75.4 m long.

Kim is building a model Airbus A340 to a scale of 1 : 200

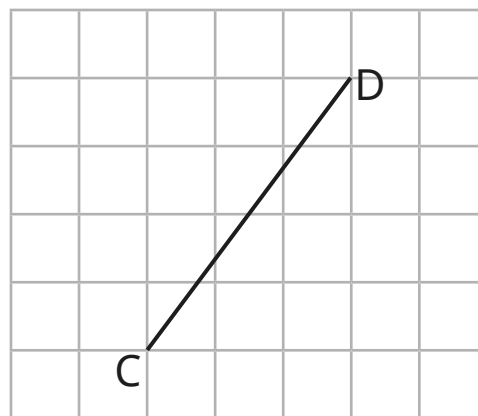
Work out the length of the model, giving your answer in centimetres.

cm

2 marks

14

Here is line segment CD.

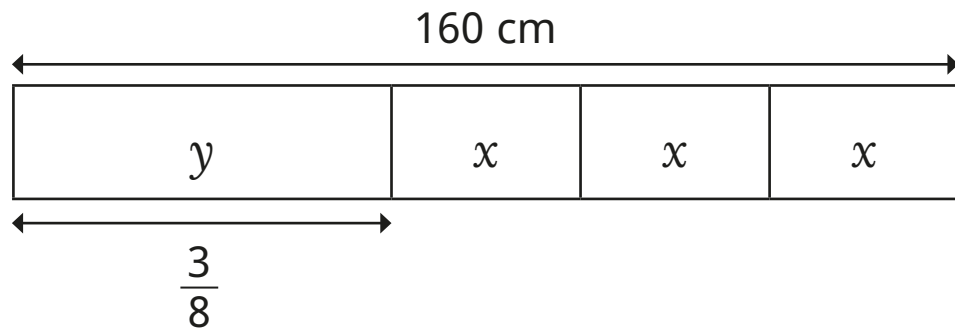


Find the gradient of line segment CD.

1 mark

15

A piece of wood is 160 cm long.
It is cut into four pieces.



Calculate the value of y .

cm

2 marks

What fraction of the whole piece of wood is x ?

1 mark

16

AB is a line segment.

The coordinates of point A are (3, 4).

The midpoint of line segment AB is at (5, -1).

Work out the coordinates of point B.

(,)

2 marks

END OF TEST