

Summer Assessment

Year 8

Mathematics

Core: Calculator allowed

Time allowed: 45 minutes

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

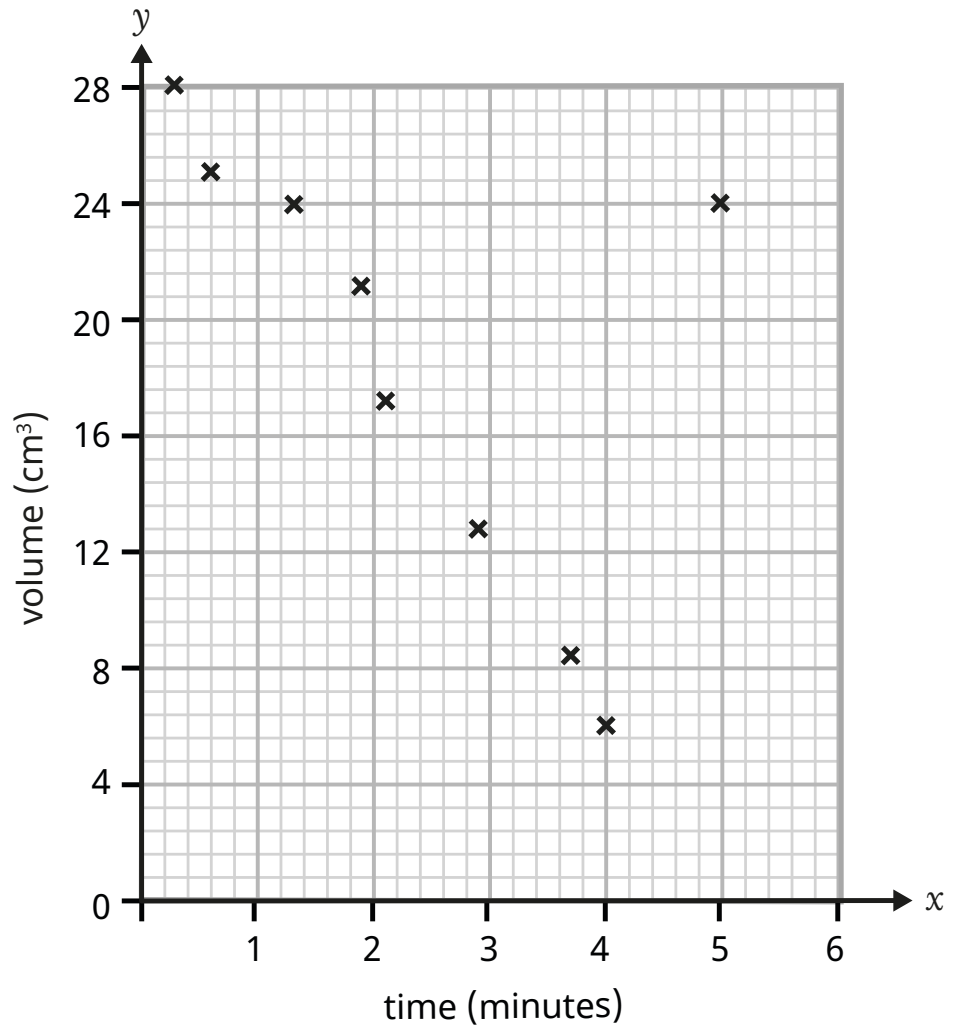
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1

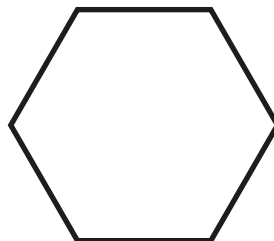
Circle the outlier on the graph.



1 mark

2

What is the angle sum of a hexagon?



2 marks

3

A film is 105 minutes long.

The film starts at 5:40 pm.

What time does the film finish?

2 marks

4

Here is part of a restaurant menu.

Starters	Mains
Soup (S)	Chicken (C)
Mushrooms (M)	Beef (B)
Prawns (P)	Lasagne (L)
	Fish (F)

Brett chooses one starter and one main.

List all the possible combinations of starter and main.

The list has been started for you.

(S, C)

2 marks

One combination of starter and main is chosen at random.

What is the probability that this combination is soup and lasagne?

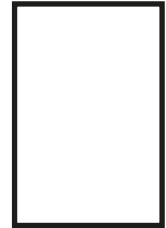
1 mark

5

A box contains white, milk and dark chocolates in the ratio 5 : 8 : 7

What fraction of the chocolates are milk chocolates?

Give your answer in its simplest form.



2 marks

6

Match each card to the correct description.

$$1 - 5x$$

expression

$$C = \pi d$$

equation

$$3p - 8 = 1$$

identity

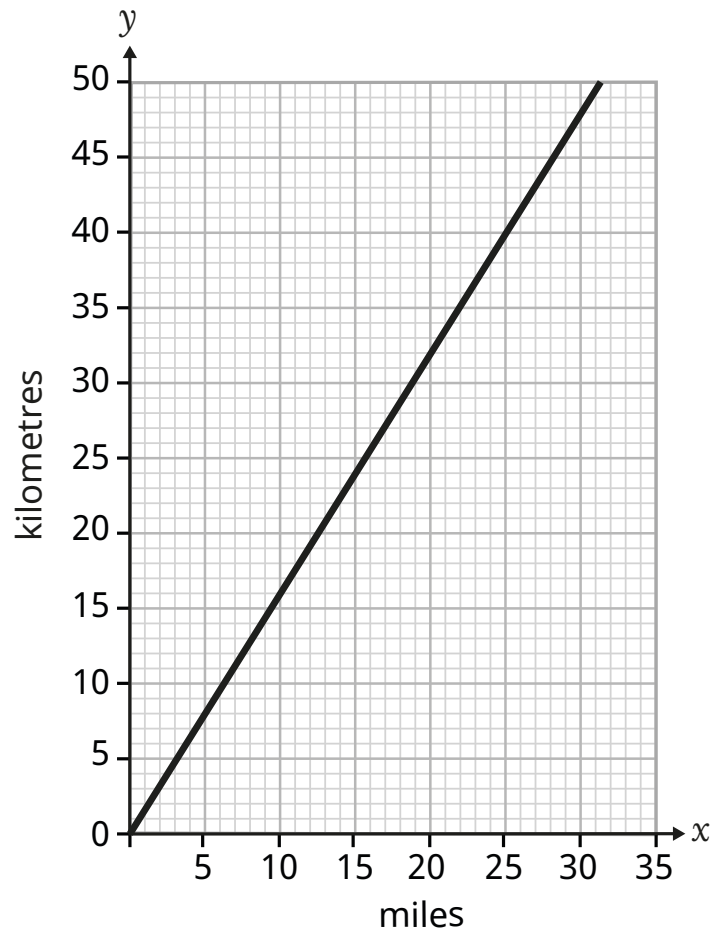
$$2(x + 3) \equiv 2x + 6$$

formula

2 marks

7

You can use this graph to convert between miles and kilometres.



Use the graph to convert 20 miles to kilometres.

km

1 mark

Convert 400 miles to kilometres.

km

1 mark

8Find the product of 18 and $\frac{2}{5}$

Give your answer as a mixed number.

2 marks**9**Complete the coordinates for the points on the line $y = 4x + 1$

(1, 5) (2, 9) (3,) (4,)

1 mark

A sequence is formed by the y-values.

Write the term-to-term rule for this sequence.

1 mark

10

Nijah wants to find out how much time people spend on social media.

She designs this questionnaire.

**How much time do you spend
on social media?**

a little bit quite a bit a lot

Write two things that are wrong with the question.

1.

2.

2 marks

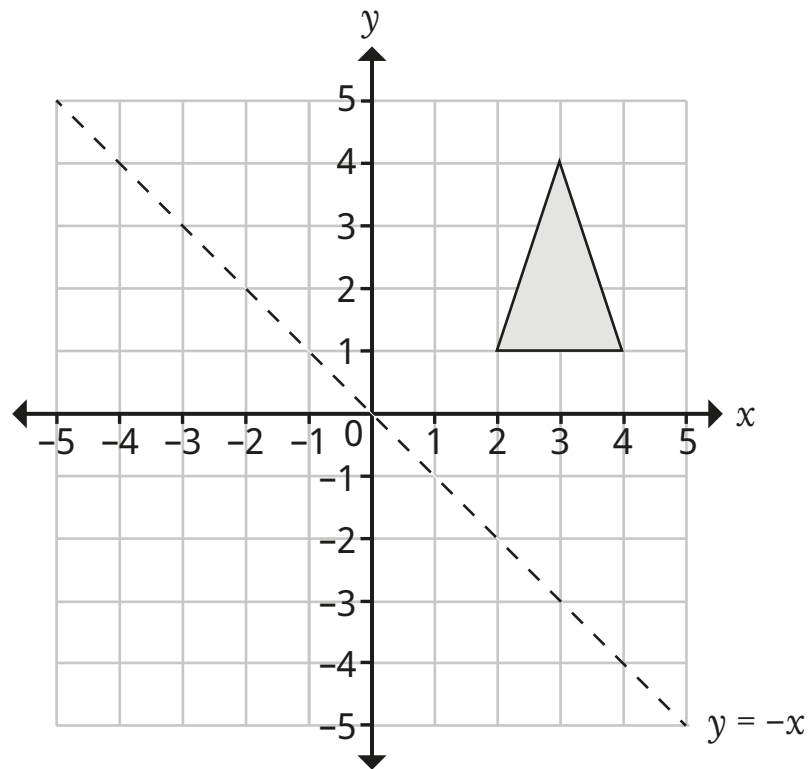
11

The population of a town is 64 000 people.

Next year, the population is expected to increase by 4%.

Work out the expected population next year.

2 marks

12Reflect the triangle in the line $y = -x$.

2 marks**13**

Solve the equation.

$$5(3x + 7) = 40$$

$x =$

2 marks

14

Here is some information about the height of ten people in a chess club.

Mean	Median	Mode	Range
1.63 m	1.57 m	1.65 m	48 cm

The tallest person is 1.72 m tall.

How tall is the shortest person?

m

2 marks

Here is some information about the heights of ten people in a book club.

Mean	Median	Mode	Range
1.67 m	1.6 m	1.66 m	60 cm

Make two comparisons between the heights of the ten people in the chess club and the ten people in the book club.

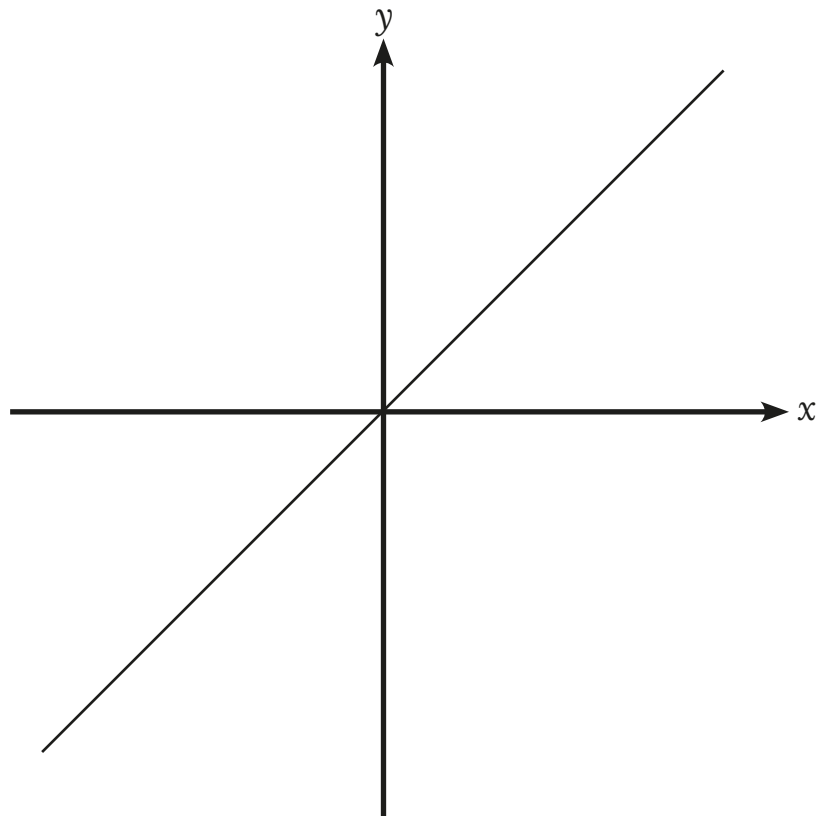
1.

2.

2 marks

15

The diagram shows a sketch of $y = 2x$.



On the same axes, sketch and label the graph of $y = 2x + 4$

1 mark

On the same axes, sketch and label the graph of $y = 3x$.

1 mark

16

$$5^{12} = 244\,140\,625$$

Use this fact to work out the division.

$$\frac{244\,140\,625}{25}$$

Give your answer as a power of 5

1 mark

17

$$p = 5.3 \times 10^3$$

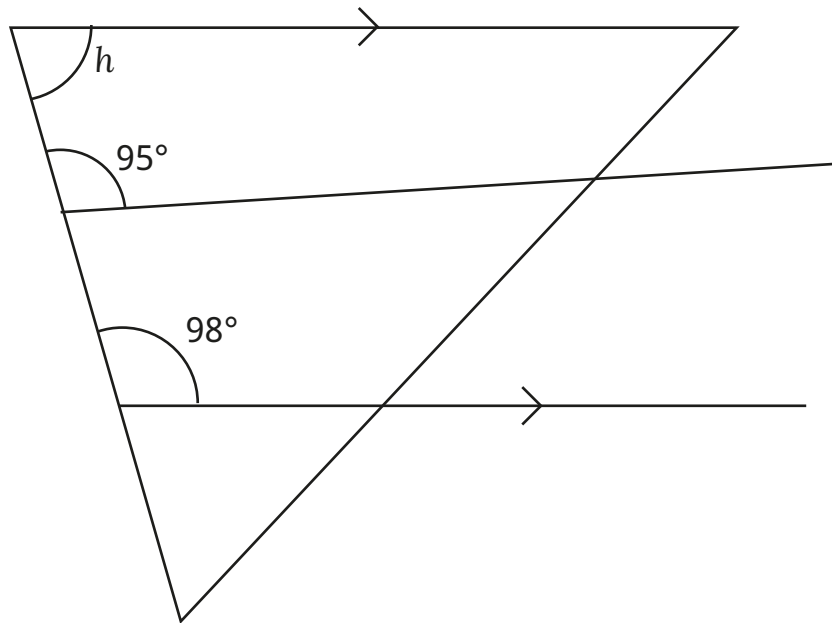
$$q = 2.5 \times 10^4$$

Work out pq .

Give your answer in standard form.

2 marks

18



Work out the size of the angle marked h .

Give a reason to support your answer.

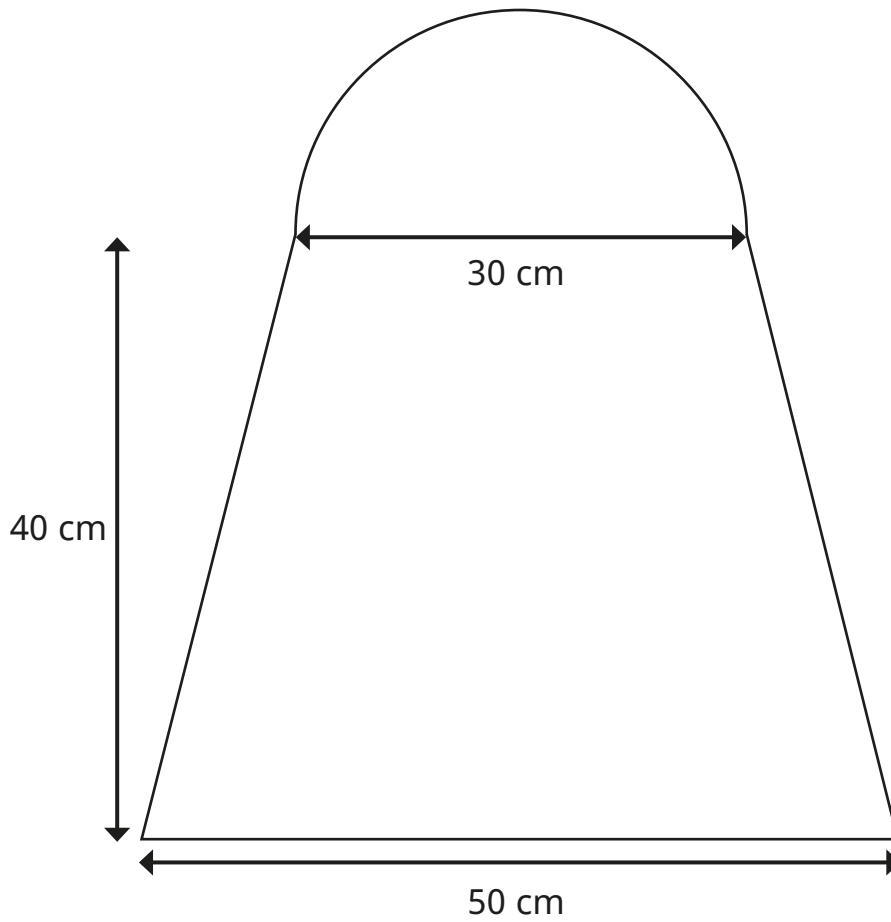
$h =$

2 marks

19

A shape is made up of a trapezium and a semicircle.

Work out the area of the shape.



cm²

3 marks

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