a

Write down all the factors of the number 20.
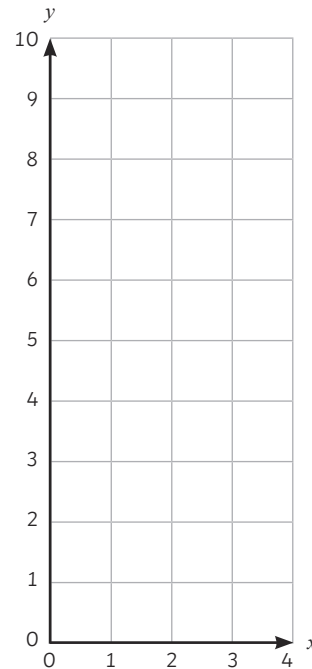
b

Calculate 5% of 300.

c

Simplify a + b + a + b

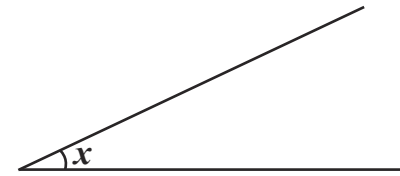**d**

i) Complete the table of values for
$y = 3x + 1$.

x	0	1	2	3
y			7	

ii) Hence draw the graph of $y = 3x + 1$ for the values $0 \leq x \leq 3$.

e

Measure the size of the angle marked x:

f

The list shows the ages of 7 children. Find the median age.

9, 10, 11, 13, 13, 15, 17

a

Which is bigger;
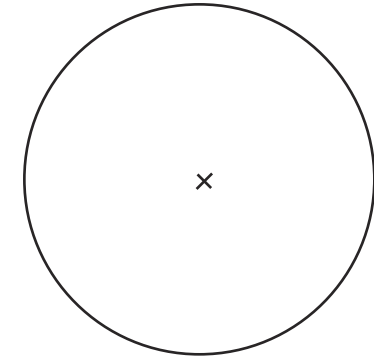
10^2 or 5^3?

c

Look at the function machine below.

Work out the output if the input is 3:

$3 \rightarrow$ | x 7 | $\rightarrow$?

e

Draw a radius on the circle.

×

b

Write $\frac{4}{5}$ as a decimal.

d

The first four terms of a sequence are:

6, 11, 16, 21...

Simran says the number 302 is in the sequence. Explain why she is wrong.

f

The following cards are placed in a box.

1, 2, 3, 4, 5, 6, 7, 8

A card is selected at random. Find the probability that the number on the card is 5.

a

Write the following numbers in order of size, starting with the smallest.

4, -2, 7, -1, 0, 5

c

Calculate the value of the letter x in the equation:

$2x + 1 = 11$

e

The frequency table shows the favourite colour of 15 children. Write down the modal colour.

Colour	Frequency
Red	3
Blue	4
Green	7
Yellow	1

d

Reflect the shape in the mirror line.

mirror line

b

Calculate the value of the letter a in the equation

$3a = 12$

f

A fair spinner has the numbers 1, 2, 3 and 4 on it. The spinner is spun.

Find the probability of the spinner landing on the number 3.

1   2
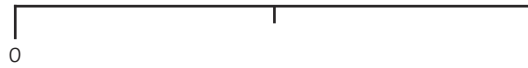
3   4

a
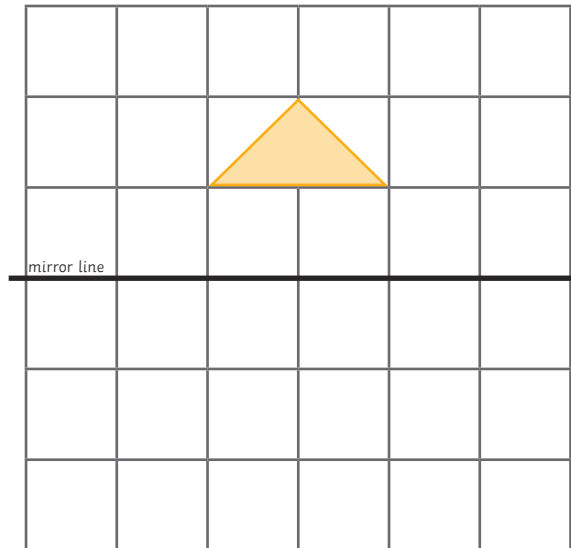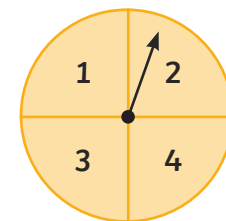
Work out, without using a calculator:

i) -3 × 4

ii) 10 + -7

iii) -20 ÷ -5

b

Eleanor thinks of a mystery number and subtracts 7. Her answer is 11.

What was her mystery number?

c

A bag contains strawberry and mint flavoured sweets. There are 4 strawberry and 6 mint sweets.

i. **A sweet is chosen at random and replaced. Mark, on the scale, the probability of choosing a strawberry sweet.**

ii. **A sweet is chosen at random. Mark, on the scale, the probability of choosing a lime sweet.**

0   1

d

Accurately measure the sides of the triangle.

e

A car travels 60 miles in 3 hours. Work out how far it would travel in 1 hour.

f

Find the highest common factor of $10x$ and $8y$.

a

Find the area of the triangle.

Diagram drawn accurately.

c

Simplify $8x - 2x$

e

Find 10% of £25.

b

Is the answer to √60 between:

a) 6 and 7

or,

b) 7 and 8?

d

Find the next two terms of the sequence:

1, 1, 2, 3, 5...

f

Round 735 to the nearest 100.

a

In a café, I order a cup of tea and a piece of cake and it costs £1.10. The next time I order 2 cups of tea and one piece of cake and it costs £1.70.
Find the cost of a piece of cake.

b

Find the perimeter of the shape.

Diagram drawn accurately.

c

List the factors of **12**.
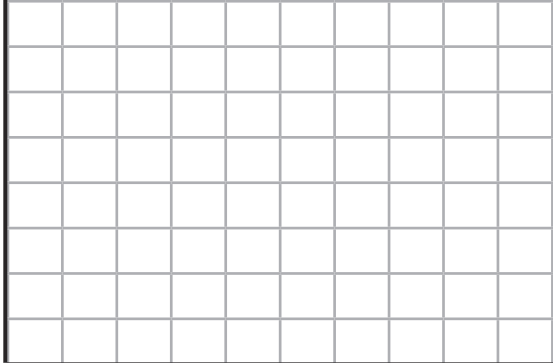
d

There are 6 dogs and 12 cats in a pet shop. Write the ratio of dogs to cats, leaving your answer in its simplest form.

e

Simplify $2x \times 3y$

f

The table shows the favourite foods of 25 children. Draw a bar chart to represent the data.

Favourite Food	Frequency
Pizza	6
Curry	5
Chinese	8
Hamburgers	4
Chips	2

a

Write down all the factors of the number 20.

1, 2, 4, 5, 10, 20

b

Calculate 5% of 300.

15

c

Simplify a + b + a + b

2a + 2b

d

i) Complete the table of values for
   $y = 3x + 1$.

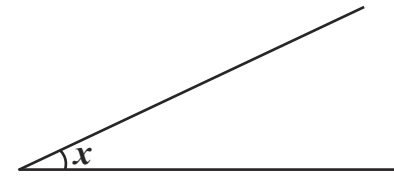| x	0	1	2	3
y	1	4	7	10

ii) Hence draw the graph of $y = 3x + 1$ for
    the values $0 \leq x \leq 3$.

Correctly drawn graph
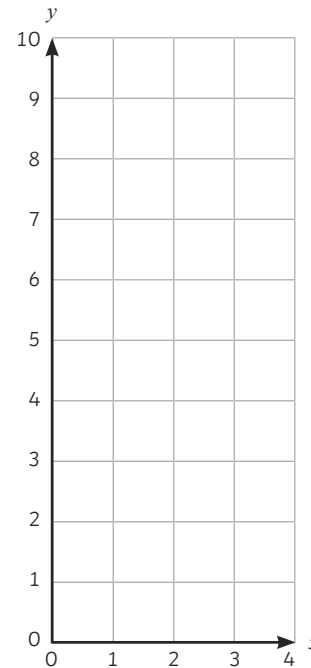
e

Measure the size of the angle marked x:

25˚ +/- 2 degrees

f

The list shows the ages of 7 children.
Find the median age.

9, 10, 11, 13, 13, 15, 17

13

a

Which is bigger;

10² or 5³?

$5^3 = 125$

c

Look at the function machine below.
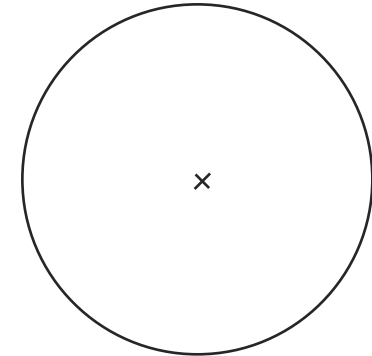
Work out the output if the input is 3:

3 → [x 7] → ?

21

e

Draw a radius on the circle.

Correctly drawn radius

✕

b

Write $\frac{4}{5}$ as a decimal.

0.8

d

The first four terms of a sequence are:

6, 11, 16, 21...

Simran says the number 302 is in the sequence. Explain why she is wrong.

The sequence always ends in 1 or 6

f

The following cards are placed in a box.

1, 2, 3, 4, 5, 6, 7, 8

A card is selected at random. Find the probability that the number on the card is 5.

$\frac{1}{8}$

a

Write the following numbers in order of size, starting with the smallest.

4, -2, 7, -1, 0, 5

| -2, -1, 0, 4, 5, 7 |

c

Calculate the value of the letter x in the equation:

$2x + 1 = 11$

| $x = 5$ |

e

The frequency table shows the favourite colour of 15 children. Write down the modal colour.

Colour	Frequency
Red	3
Blue	4
Green	7
Yellow	1

| Green |

d

Reflect the shape in the mirror line.

mirror line

b

Calculate the value of the letter a in the equation

$3a = 12$

| $a = 4$ |

f

A fair spinner has the numbers 1, 2, 3 and 4 on it. The spinner is spun.
Find the probability of the spinner landing on the number 3.

1 2
3 4
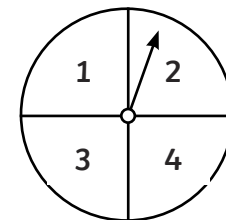
| $\frac{1}{4}$ |

a

Work out, without using a calculator:

i) -3 × 4

-12

ii) 10 + -7

3

iii) -20 ÷ -5

4

c

A bag contains strawberry and mint flavoured sweets. There are 4 strawberry and 6 mint sweets.

i. **A sweet is chosen at random and replaced. Mark, on the scale, the probability of choosing a strawberry sweet.**

ii. **A sweet is chosen at random. Mark, on the scale, the probability of choosing a lime sweet.**

0 — S — 1

L

e

A car travels 60 miles in 3 hours. Work out how far it would travel in 1 hour.

20 miles

b

Eleanor thinks of a mystery number and subtracts 7. Her answer is 11.
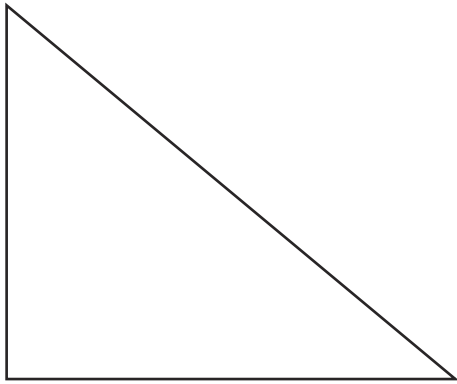
What was her mystery number?

18

d

Accurately measure the sides of the triangle.

Can lead into a nice discussion on Pythagorean triples!

3cm

5cm

4cm

f

Find the highest common factor of $10x$ and $8y$.

2

a

Find the area of the triangle.

15cm²

Diagram drawn accurately.

c

Simplify $8x - 2x$

$6x$

e

Find 10% of £25.

£2.50

b

Is the answer to √60 between:

a) 6 and 7

or,

b) 7 and 8?

b) 7 and 8 since 7² is 49 and 8² is 64.

d

Find the next two terms of the sequence:

1, 1, 2, 3, 5...

8, 13

f

Round 735 to the nearest 100.

700

a In a café, I order a cup of tea and a piece of cake and it costs £1.10. The next time I order 2 cups of tea and one piece of cake and it costs £1.70.
Find the cost of a piece of cake.

50p

b Find the perimeter of the shape.

20cm

c List the factors of 12.

1, 2, 3, 4, 6, 12

d There are 6 dogs and 12 cats in a pet shop. Write the ratio of dogs to cats, leaving your answer in its simplest form.

1 : 2

e Simplify $2x \times 3y$

$6xy$

f The table shows the favourite foods of 25 children. Draw a bar chart to represent the data.

Favourite Food	Frequency
Pizza	6
Curry	5
Chinese	8
Hamburgers	4
Chips	2