## Year 6 – Spring 1
## This term your child will be learning about:
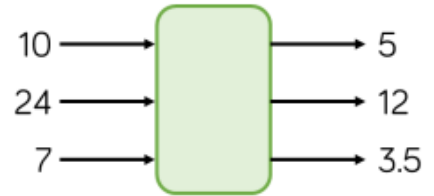# **Algebra**

**Fluency:**

Here is a function machine.

Input ⟶ × 4 ⟶ Output
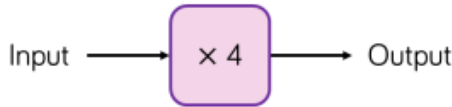
- What is the output if the input is 2?
- What is the output if the input is 7.2?
- What is the input if the output was 20?
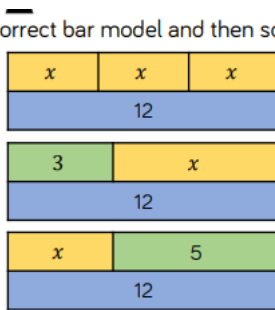- What is the input if the output was 22?

Match each equation to the correct bar model and then solve to find the value of x.

$x + 5 = 12$

$3x = 12$

$12 = 3 + x$

| x | x | x |
|---|---|---|
| 12 | | |

| 3 | x |
|---|---|
| 12 | |

| x | 5 |
|---|---|
| 12 | |

Find the missing function.

10 ⟶ ⟶ 5
24 ⟶ ⟶ 12
7 ⟶ ⟶ 3.5

If ⭐ = 7 and 💗 = 5, what is the value of:

$$⭐ + 💗 + 💗$$

If $a = 7$ and $b = 5$ what is the value of:

$$a + b + b$$

**Problem Solving:**

Here are two formulae.

$$p = 2a + 5$$

$$c = 10 - p$$

Find the value of $c$ when $a = 10$

Eva spends 92p on yo-yos and sweets

She buys $y$ yo-yos costing 11p and $s$ sweets costing 4p.

Can you write an equation to represent what Eva has bought?

The rule for making scones is use 4 times as much flour ($f$) as butter ($b$).

Which is the correct formula to represent this?

A     $f = \dfrac{b}{4}$        B     $f = 4b$

C     $f = b + 4$      D     $4f = b$

**Mathematical Talk:**
What do you think 'one-step function' means?
What do you think input and output mean?
What is the output if ….? What is the input if ….?
Are 2a + 6 and 6 + 2a the same? Explain your answer

**Key Skills: To be able to use division to find factors of numbers**