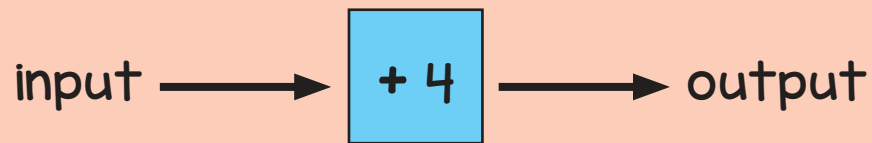# 6 ALGEBRA

White Rose Maths

1 Here is a function machine.

input $\longrightarrow$ **+ 4** $\longrightarrow$ output

Complete the sentences.

When the input is 8, the output is ☐

When the input is ☐ , the output is 9

2 If ⭐ = 5 and 😊 = 8, find the total of each row and column.

⭐	⭐	😊	
⭐	❤️	😊	19
❤️	❤️	😊	
	17		

3 c and d represent positive integer variables.

$$c + d = 7$$

Complete the table to show possible values of c and d.

c	d

Here is another equation.

$$x + y = 10$$

If x = 4.5, what is the value of y?

4 Solve the equations to find the unknown value.
Use the bar models to help you.

$x + 4 = 7$

7	
x	4

$b - 5 = 7$

b	
5	7

$4c = 20$

20			
c	c	c	c
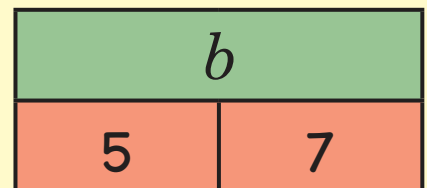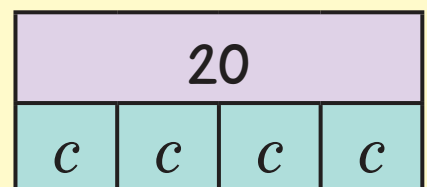
5 Kim is balancing objects.

What is the mass of one of the cubes?

6 If $p = 8$, what is the value of $2p + 7$?

7 Huan draws a bar model to help him solve

$3x + 8 = 44$

x	x	x	8
44			

Solve the equation $3x + 8 = 44$

8 Solve $10y - 4 = 86$

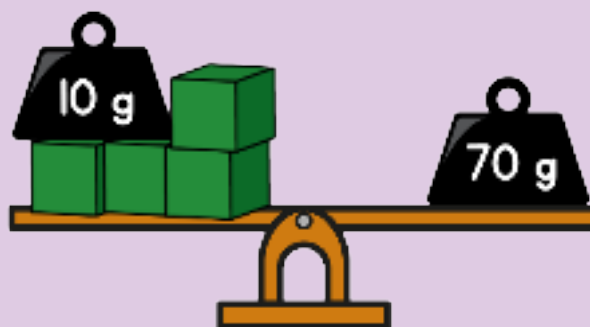**9** Dexter is selling ice creams.

He uses this formula to work out the price where s is the number of scoops and t is the number of toppings.

> **price = £1.50s + £0.60t**

Work out the cost of an ice cream with 3 scoops and 2 toppings.

Dani buys an ice cream that costs £2.70
How many scoops does she have?

How many toppings does she have?

Answers

1 When the input is 8, the output is **12**

When the input is **5**, the output is 9

2

⭐	⭐	🙂	18
⭐	❤️	🙂	19
❤️	❤️	🙂	20
16	17	24	

3

c	d
1	6
2	5
3	4
4	3
5	2
6	1

$y = 5.5$

4 $x = 3$

$b = 12$

$c = 5$

5 15 g

6 23

7 $x = 12$

8 $y = 9$

9 £5.70

1 scoop, 2 toppings