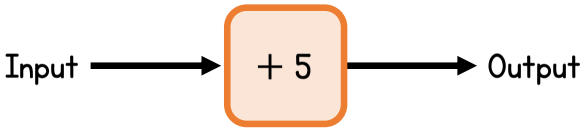
Year 6

Algebra

Name _____

1 Here is a function machine.



Complete the sentences.

When the input is 7, the output is 12

When the input is 2, the output is 7

2 marks

2 If ★ = 6 and ☺ = 8, find the total of each row and column.

★	★	☺	20
★	♡	☺	26
♡	♡	☺	32
24	30	24	

3 marks for 4 correct.
2 marks for 3 correct.
1 mark for 2 correct.

3 marks

3 c and d represent positive integer variables.

$c + d = 5$

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

c	d
1	4
2	3
3	2
4	1

Accept 0 and 5 or 5 and 0
1 mark for at least 2 correct combinations.

2 marks

4 Solve the equations.

$x + 3 = 9$

$x = 6$

1 mark

$b - 3 = 9$

$b = 12$

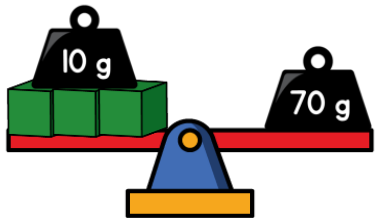
1 mark

$3c = 12$

$c = 4$

1 mark

5 Hassan is balancing objects.



What is the mass of one of the cubes?

1 mark for working out the mass of 3 cubes is 60 g.

20 g

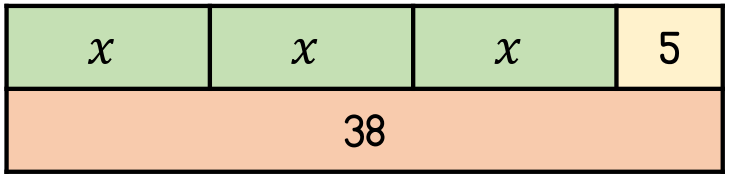
2 marks

6 If $p = 7$, what is the value of $2p + 9$?

23

1 mark

7 Nina uses a bar model to solve $3x + 5 = 38$



Solve the equation $3x + 5 = 38$

1 mark for $3x = 33$

$x = 11$

2 marks

8 Solve $10y - 3 = 77$

1 mark for $10y = 80$

$y = 8$

2 marks

9 Dexter is selling ice-creams.
He uses this formula to work out the price.

$$\text{Price} = £1.50s + £0.40t$$

Where s is the number of scoops and t is the number of toppings.

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

£ 4.20

1 mark

Libby buys an ice-cream that costs £2.30
How many scoops does she have?

1

1 mark

How many toppings does she have?

2

1 mark

Circle how confident you feel with algebra.

1	2	3	4	5
Not confident				Very confident