Year 6

Algebra

Name _____

1 Here is a function machine.

Input $\longrightarrow$ $+5$ $\longrightarrow$ Output

Complete the sentences.

When the input is 7, the output is ___12___

When the input is ___2___ , the output is 7

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.

2 marks

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

$$b - 3 = 9$$
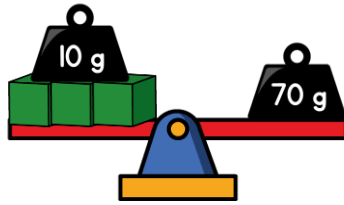
$b = 12$ _____
1 mark

$$3c = 12$$

$c = 4$ _____
1 mark

5 Hassan is balancing objects.

What is the mass of one of the cubes?

I 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_____

I mark

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

x	x	x	5
38			

Solve the equation $3x + 5 = 38$

I mark for $3x = 33$

$x =$ ___11_____

2 marks

8 Solve $10y - 3 = 77$

I mark for $10y = 80$

$y =$ ___8_____

2 marks

9 Dexter is selling ice-creams.

He uses this formula to work out the price.

$$Price = £1.50s + £0.40t$$

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_____

I mark

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

___1_____

I mark

How many toppings does she have?

___2_____

I mark

Circle how confident you feel with algebra.

1   2   3   4   5

Not confident   Very confident