Substitution

1

Work out the value of $3a + 2b$ when $a = 5$ and $b = 4$.

$= 3(\ \ ) + 2(\ \ )$

Answer _____

2

Work out the value of $6x - y$ when $x = 3$ and $y = -2$.

$= 6(3) - (-2)$

Answer _____

3

Work out the value of $x^2 + 5y$ when $x = -4$ and $y = 2$.

$= (\ \ )^2 + 5(\ \ )$

Answer _____

4

Work out the value of $4p - 3q$ when $p = -2$ and $q = -5$.

$= 4(\ \ ) - 3(\ \ )$

Answer _____

5

Work out the value of $2t^2 - 3$ when $t = -3$.

Answer _____

6

Mia works out $a^2 + 10$ when $a = -6$. She writes $-6^2 + 10 = -26$. What has she done wrong? Work out the right answer.

Answer _____

7

$v = u + at$. Work out v when $u = 15$, $a = -2$ and $t = 6$.

Answer _____

8

The cost, C pounds, of a bowling lane for n people is $C = 12 + 6n$. Work out the cost for 5 people.

Answer _____

Substitution *further practice*

9

Work out the value of $5m - 2n$ when $m = -3$ and $n = -4$.

Answer _____

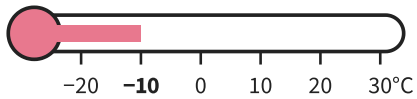
10

Work out the value of $3(x - y)$ when $x = 2$ and $y = -4$.

Answer _____

11

To change degrees Celsius, C, to degrees Fahrenheit, F, use $F = 1.8C + 32$. Find F when $C = -10$.



Answer _____

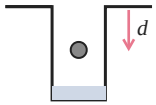
12

Work out the value of $a^2 - b^2$ when $a = -6$ and $b = 4$.

Answer _____

13

A stone is dropped down a well. After t seconds it has fallen d metres, where $d = 5t^2$. How far has it fallen after 3 seconds?



Answer _____

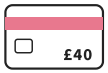
14

When $k = -4$, Amy works out $2k^2$ and Ben works out $(2k)^2$. Who gets the bigger answer, and by how much?

Answer _____

15

Leah puts £40 on a travel card and spends £15 a week. After w weeks the balance, B pounds, is $B = 40 - 15w$.
Work out B when $w = 4$.
What does your answer mean?



Answer _____

16

Kai says $5 - 2x$ is always less than 5.
Is he right? Explain your answer.

Answer _____