



1 $T = 4x + 3y$

Work out the value of T when $x = 5$ and $y = 2$.

(2 marks)

Substitution means replacing each letter with its given value. Numbers next to letters mean multiplication, so $4x$ becomes 4×5 . Multiply before adding
Substitute the values

$$T = 4 \times 5 + 3 \times 2$$

$$T = 20 + 6 = 26$$

26

2 Work out the value of $3x + 2$ when $x = 4$

(1 mark)

$$3x + 2 = 3 \times 4 + 2$$

$$= 12 + 2$$

14

3 $v = 5t - 8$

Work out the value of v when $t = 3.4$

(2 marks)

$$\text{Substitute } t = 3.4: v = 5 \times 3.4 - 8$$

$$v = 17 - 8 = 9$$

9

4 Work out the value of $4y - 7$ when $y = 6$

(1 mark)

$$4y - 7 = 4 \times 6 - 7$$

$$= 24 - 7$$

17

5 $a = 3$ and $b = 5$

a. Work out the value of $2a + b$

b. Work out the value of $3b - a$

(2 marks)

a)

$$2a + b = 2 \times 3 + 5$$

$$= 6 + 5$$

$$\boxed{11}$$

b)

$$3b - a = 3 \times 5 - 3$$

$$= 15 - 3$$

$$\boxed{12}$$

6 Work out the value of $5 - 2x$ when $x = 3$

(2 marks)

$$5 - 2x = 5 - 2 \times 3$$

$$= 5 - 6$$

$$\boxed{-1}$$

7 The cost, C pounds, of hiring a bike for h hours is given by

$$C = 5 + 3h$$

Work out the cost of hiring the bike for 4 hours.

(2 marks)

$$C = 5 + 3 \times 4$$

$$= 5 + 12$$

$$\boxed{£17}$$

8 Work out the value of $x^2 + 7x$ when $x = 6$.

(2 marks)

$$x^2 = 6 \times 6 = 36$$

$$7x = 7 \times 6 = 42$$

$$36 + 42 = 78$$

$$\boxed{78}$$

9

Work out the value of $2n^2 + 1$ when $n = 4$

(2 marks)

$$2n^2 + 1 = 2 \times 4^2 + 1$$

Square first

$$= 2 \times 16 + 1$$

$$= 32 + 1$$

33

10

a. Simplify $4c \times 2d$ b. Work out the value of $4c \times 2d$ when $c = 3$ and $d = 1.5$

(3 marks)

a) $4 \times 2 = 8$ and the letters are c and d , so $8cd$

b) Substitute into $8cd$: $8 \times 3 \times 1.5$

b) $8 \times 3 = 24$, then $24 \times 1.5 = 36$