



Name: _____ **Date:** _____ **Score:** _____ / 58

1 $T = 4x + 3y$

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

(2 marks)

Answer _____

2 $v = 5t - 8$

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

(2 marks)

Answer _____

3 The perimeter of a rectangle is given by the formula $P = 2l + 2w$

Work out the value of P when $l = 7.5$ and $w = 4.2$

(2 marks)

Answer _____

4 $E = 3a - 2b$

Work out the value of E when $a = -4$ and $b = 5$.

(2 marks)

Answer _____

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

(2 marks)

Answer _____

6

$$5y = 35$$

- Work out the value of y .
- Work out the value of $2y^2$

(3 marks)

Answer _____

7

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

(3 marks)

Answer _____

8

Here is a table of values for $4n - 5$

n	2	5	?	?
$4n - 5$	?	?	19	35

Work out the four missing numbers in the table (the two n values and the two values of $4n - 5$ marked ?).

(4 marks)

Answer _____

9

$$F = 5v + 20$$

- Work out the value of F when $v = 6$.
- Work out the value of v when $F = 95$.

(4 marks)

Answer _____

- 10 A tool hire company uses this rule to work out the cost of hiring a floor sander.

Total cost = £45 × number of days + £60 deposit

- a. Meera hires the sander for 7 days.
Work out her total cost.
- b. Liam's total cost is £555.
Work out the number of days Liam hires the sander for.

(4 marks)

Answer _____

- 11 a. Work out the value of $2a - 3b$ when $a = -1$ and $b = 4$.

- b. Work out the value of $4a^2 + b$ when $a = -3$ and $b = -7$.

(4 marks)

Answer _____

- 12 The speed, S , in metres per second of a runner is given by the formula

$$S = \frac{60}{t}$$

where t is the time in seconds taken to run 60 metres.

- a. Work out the value of S when $t = 4$ and when $t = 12$.
- b. Zara says, "When t gets bigger, S gets bigger." Use your answers to part (a) to show that Zara is wrong.
- c. Work out the value of t when $S = 7.5$

(4 marks)

Answer _____

13 $v = u + at$

- Work out the value of v when $u = 7$, $a = 9.8$ and $t = 5$.
- Work out the value of t when $v = 87$, $u = 12$ and $a = 5$.

(4 marks)

Answer _____

14 $y = 3(x + 4)$

- Work out the value of y when $x = 5$
- Work out the value of x when $y = 27$

(4 marks)

Answer _____

15 $m = 3n - 2p$

- Work out the value of m when $n = -5$ and $p = 4$.
- Work out the value of n when $m = 19$ and $p = -2$.

(4 marks)

Answer _____

- 16 a. Work out the value of $5x + 2y$ when $x = 4$ and $y = -3$.
b. Work out the value of $x^2 - 4x$ when $x = -2$.
c. $D = (h + 3k) \div 2$
Work out the value of h when $D = 10$ and $k = 4$.

(6 marks)

Answer _____

- 17 A builder uses the formula $C = 8n + 45$ to work out the cost, in pounds, of a job that takes n hours.
Priya estimates the cost of a 16 hour job as £150.
An estimate is acceptable if it is within 10% of the cost given by the formula.
Is Priya's estimate acceptable? You must show your working.

(4 marks)

Answer _____

End of questions | Total 58 marks