Y6 Formulae

KS2 Y6 Maths · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

The perimeter of a rectangle is P = 2(l + w). Find P when l = 6 cm and w = 4 cm.

Step 1 · Substitute the values

P = 2 × (6 + 4)

Step 2 · Brackets first

P = 2 × 10

Answer: P = 20 cm

Check: 6 + 4 + 6 + 4 = 20 ✓

2. Now try one with the steps

Bike hire costs C = 5h + 10 pounds, where h is the number of hours. How much for 3 hours?

Step 1 · 5h means 5 × h

Step 2 · Add 10

Answer:

3. Practice

Have a go at each one. There is space underneath to work it out.

1. y = 3x. Find y when x = 7.

2. a = b + 9. Find a when b = 15.

3. The perimeter of a square is P = 4s. Find P when s = 8 cm.

4. A = l × w. Find A when l = 9 cm and w = 6 cm.

5. C = 2n + 3. Find C when n = 10.

6. P = 2(l + w). Find P when l = 7 cm and w = 5 cm.

7. T = 30m + 15. Find T when m = 4.

8. V = l × w × h. Find V when l = 5 cm, w = 4 cm and h = 3 cm.

9. y = 5x – 4. Find y when x = 6.

10. C = 5h + 10. Find h when C = 40.

11. Pencils cost 25p each. Write a formula for the cost, C pence, of n pencils.

12. A taxi charges £3 plus £2 for every mile, m. Write a formula for the cost C in pounds, then find the cost of an 8-mile journey.

13. n = 3t + 4s gives the number of sides on t triangles and s squares. Find n when t = 4 and s = 2.

14. m = 2n and n = 3p. Find m when p = 5.

15. Alex says that if y = 2x + 1 and x = 4, then y = 25. What mistake has he made? What is y?

4. Before you hand it in

With x = 4, writing 2x as 24.

2x means 2 × x, so 2x = 2 × 4 = 8.

Working out 5h + 10 with h = 3 as 5 × 13 = 65.

Follow the order of operations: 5 × 3 = 15 first, then + 10 = 25.

Using the wrong value for each letter.

Write each letter and its value before you start: l = 6, w = 4.