Arithmetic

1. 4,625 ÷ 5	**2.** 328 – 29 x 3	**3.** $\frac{3}{7} \div 2$	**4.** 2.1 x 4.5

Practice: Substitution and Formulae

5. Recap: Explain what 'substitution' means.

6. If square = 5 and circle = 3, work out these:

☐ + ☐ – ◯

◯ x ☐ + ◯

7. Substitute these values into the expressions to work them out. x = 3, y = 4, z = 5

a. x + y + z   b. xy – 7   c. 3 + 2z

8. Substitute these values into the expressions to work them out. a = 10, b = 2, c = 6

a. abc   b. $\frac{a}{b}$ + 13   c. c^2 – ab

9. A taxi driver charges £5 for a journey plus 25p for each mile. If c = total cost and m = number of miles, write the formula to represent this.

10. Explain what it means when two letters are next to each other in an equation.

For example, ab

11. With the formula from question 9, work out the cost of a 10-mile journey.

12. How long was the journey if it cost £8.75?

8.75 = 5 + 0.25m

13. Using the formula ab+c, Zeshan substitutes these values into the expression a = 2, b = 4, c = 7. He says the answer is 13. Explain Zeshan's mistake.

14. a, b and c are two digit whole numbers above 2.

What numbers could a, b and c be?

$$ab - c = 45$$

💬 **You might want to talk to an adult**

🔍 **Spot the mistake**

Challenge

Answers

Q no.	Question	Answer
1	4,625 ÷ 5	925
2	328 – 29 x 3	241
3	$\frac{3}{7} \div 2$	$\frac{3}{14}$
4	2.1 x 4.5	9.45
5	Explain what 'substitution' means.	A substitution is when you substitute a letter or symbol with a value. The same symbol or letter could have multiple values, depending on the substitution.
6	If [square] = 5 and [circle] = 3, work out these:	7, 18
7	Substitute these values into the expressions to work them out.	a. 12, b. 5, c. 13
8	Substitute these values into the expressions to work them out	a. 120, b. 18, c. 16
9	Write the formula to represent the information.	c = 5 + 0.25m
10	Explain what it means when two letters are next to each other in an equation.	When letters are next to each other in an equation, it means they are multiplied together. ab means a x b.
11	With the formula from question 9, work out the cost of a 10-mile journey.	£7.50
12	How long was the journey if it cost £8.75?	15 miles
13	Explain Zeshan's mistake.	Zeshan has added all the substitutions instead of following the expression. The correct answer is 15.
14	a, b and c are two digit whole numbers above 2. What numbers could a, b and c be? ab - c = 45	Accept substitutions that satisfy the expression. For example, a = 5, b = 11, c = 10 a = 3, b = 17, c = 6 a = 8, b = 7, c = 11