Arithmetic

1. $\frac{5}{8} \times \frac{2}{5}$

2. 3 – 1.4

3. 0.25 x 20

4. $1\frac{3}{4} \times 12$

Practice: Forming and Solving 2 Step Equations

5. Recap: Explain why it is important to 'do the same to both sides' in algebra.

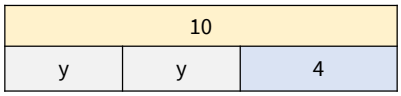
y - 4 = 12

6. Using y to represent the missing number, write this as an algebraic equation.
I think of a number. I multiply by 4 and subtract 2. My answer is 18.

7. Write this as an algebraic equation.

I think of a number. I divide it by 2 and add 9. My answer is 11.

8. Use the bar model to solve this equation.



9. Draw a bar model to find y in these expressions.

a. 2y + 2 = 38

b. $\frac{y}{5} + 10 = 14$

10. Explain the order of operations.

11. Solve the equations to find y.

a. 42 = 9y + 6

b. 10 = 7y - 7.5

12. Solve the equations to find y.

a. $0 = \frac{y}{3} - 3$

b. $\frac{y}{6} + 8 = 10.5$

13. 4a - 3 = 49

Husnain says a = 184.

Explain Husnain's mistake.

Challenge

14. Karen is baking a cake. The recipe she's using is very confusing. Help her find the correct measure for each ingredient.

Flour - 110g
Sugar - 5y + 15
Butter - 12(y - 10)
Butter cream - 23y + 13

Sugar is the same as flour.

Find how much butter and butter cream she needs.

You might want to talk to an adult

Spot the mistake

Answers

Q no.	Question	Answer
1	$\frac{5}{8} \times \frac{2}{5}$	$\frac{10}{40}$ or $\frac{1}{4}$
2	3 – 1.4	1.6
3	0.25 x 20	5
4	$1\frac{3}{4} \times 12$	21
5	Explain why it is important to 'do the same to both sides' in algebra.	It is important that pupils understand the = sign means the equation is balanced. Using the example, if they added 4 to one side to remove it from one side but didn't do the same to the other, the calculation would be uneven and the answer incorrect as y cannot = 12.
6	Write this as an algebraic equation.	4y – 2 = 18
7	Write this as an algebraic equation.	$\frac{y}{2} + 9 = 11$
8	Use the bar model to solve this equation.	The equation is 2y + 4 = 10 Pupils should have started by subtracting four from both sides leaving 2y = 6 then dividing both sides by 2. y = 3
9	Draw a bar model to find y in these expressions.	a. y = 18, b. 20
10	Explain the order of operations.	BODMAS or BIDMAS B - brackets O/ I - of or indices (for example squared numbers or cubed numbers) D/ M - division and multiplication A/ S - addition and subtraction Pupils need to understand that the order they complete calculations is important. If they do not follow the order of operations, the answer they find will be incorrect. Division and multiplication can be completed in any order after brackets and indices. This is similar to addition and subtraction, providing they are completed last.
11	Solve the equations to find y.	a. 4, b. 2.5
12	Solve the equations to find y.	a. 9, b. 15
13	Explain Husnain's mistake.	Husnain has not completed the inverse to find the value of a. He has taken 49, subtracted 3 then multiplied by 4. Husnain should have added three to both sides (leaving 4a = 52) then divided both sides by 4. The correct answer is a = 13.
14	Find how much butter and butter cream Karen needs.	5y + 15 = 110g 5y = 95g y = 19 Butter = 108g Buttercream = 450g