

GCSE Maths: Equations with fractions (Foundation): worksheet

GCSE Maths - Linear Equations - Foundation - Lesson 9.6

Name: _____

Date: _____

Score: _____

10 questions. Write your answers in the spaces. Answers and step-by-step help are free at websink.site/gcse/maths/ch09-linear-equations/foundation/equations-with-fractions/

Exercise 9F Equations with fractions Non-calculator

1 Solve these equations. Multiply both sides by the bottom number.

(a) $\frac{x+3}{2} = 5$

Answer: _____

(b) $\frac{x+1}{3} = 4$

Answer: _____

(c) $\frac{x-2}{5} = 2$

Answer: _____

(d) $\frac{x+7}{4} = 3$

Answer: _____

(e) $\frac{x-4}{2} = 6$

Answer: _____

(f) $\frac{x+5}{6} = 2$

Answer: _____

2 Solve these equations. The top has two terms.

(a) $\frac{2x+1}{3} = 5$

Answer: _____

(b) $\frac{3x-2}{4} = 4$

Answer: _____

(c) $\frac{5x+3}{2} = 14$

Answer: _____

(d) $\frac{4x-1}{3} = 5$

Answer: _____

(e) $\frac{2x+5}{7} = 3$

Answer: _____

(f) $\frac{3x+1}{5} = 2$

Answer:

3 Solve these equations. Find the lowest common multiple of the bottoms first.

(a) $\frac{x}{2} + \frac{x}{3} = 10$

Answer:

(b) $\frac{x}{3} + \frac{x}{4} = 7$

Answer:

(c) $\frac{x}{2} - \frac{x}{5} = 6$

Answer:

(d) $\frac{x}{4} + \frac{x}{2} = 9$

Answer:

(e) $\frac{x}{3} + 2 = \frac{x}{2}$

Answer:

(f) $\frac{x}{5} + 3 = \frac{x}{2}$

Answer:

4 Solve these equations.

(a) $\frac{x}{4} + 3 = 8$

Answer:

(b) $\frac{x}{3} - 5 = 1$

Answer:

(c) $\frac{x}{6} + 2 = 7$

Answer:

(d) $\frac{x}{2} - 3 = 4$

Answer:

5 Half of a number, plus 3, makes 11. Find the number.

Answer:

6 Ana has read a third of her book and 10 more pages. She has read 40 pages altogether. How many pages are in the book?

Answer:

7 Kai solves $\frac{x}{2} + 3 = 7$. His first line is $x + 3 = 14$. Explain his mistake and find the correct solution.

Answer:

8 Three numbers are x , $x + 4$ and $x + 8$. Their mean is 12. Find the three numbers.

Answer:

9 Solve these equations.

(a) $\frac{x}{2} = 4$

Answer:

(b) $\frac{x}{3} + 1 = 4$

Answer:

(c) $\frac{x+1}{2} = 3$

Answer:

10 Show that $x = 6$ is the solution of $\frac{x}{2} + \frac{x}{3} = 5$.

Answer: