

Solve the following equations for x .

1. $3x + 2 = 5$

2. $\frac{x + 3}{2x - 1} = 3$

3. $2(3x + 2) = x - 11$

4. $\frac{3}{2x - 1} = 1 + \frac{4x + 1}{2x - 1}$

5. $5x - 3 = 6x + 1$

6. $(x - 1)^2 = (x - 2)^2$

7. $x + 4 = 3(5 - 2x) + 3(2 + x)$

8. $\frac{1}{x} + \frac{2}{3x} = \frac{1}{6}$

9. $x + \frac{2}{5} = 3\left(\frac{1}{5} - 2x\right) + 3$

10. $\frac{1}{2} + \frac{x}{3} = \frac{5}{6}$

11. $\frac{1}{2x} + \frac{1}{3x} = \frac{5}{6x}$

12. Solve the following equation for y in terms of x :

$$5x + 4y = 32$$

Answers:

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|-------------------|------------------|--------------------|----------------|-------------|----------------------------|
| 1. 1 | 2. $\frac{6}{5}$ | 3. -3 | 4. No solution | 5. -4 | 6. $\frac{3}{2}$ |
| 7. $\frac{17}{4}$ | 8. 10 | 9. $\frac{16}{35}$ | 10. 1 | 11. All x | 12. $y = 8 - \frac{5}{4}x$ |