Solve Linear Equations

Learning Objectives

- Solve equations in one variable algebraically, variable just one side
- Solve equations in one variable algebraically, variable on both sides

Solve equations in one variable algebraically, variable just one side

1. Solve for the variable in $3(x-4) + x = 8$.

Solve equations in one variable algebraically, variable on both sides

2. Solve for the variable in $2[10 + 3(x-1)] + 9 = 4(x-7) + 21$.

3. Solve for the variable in $\frac{1}{2}[4 - (x + 7)] + \frac{3}{4} = \frac{x-5}{6} - 2$.

- Simplify expressions first, starting with the innermost parentheses.
- It can be helpful to clear fractions by multiplying both sides of the equation by the LCD.
- Combine like terms on each side before collecting variables on one side and constants on the other.

ANSWER KEY

1. $x = 5$
2. $x = -15$
3. $x = \frac{25}{8}$