

# Solving Multi-Step Equations 1.3



## Overview of problems

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### Example Set: A

**Solve the equations- show all work:**

1.  $8(y - 4) = 10$

2.  $5(x + 6) = 2x$

3.  $-6x + 8 = 4x - 12$

4.  $2(x + 6) = 9(x - 1)$

5.  $15x + 21 - x = 10x - 9$

### Example Set: B

**Solve the equations- show all work:**

1.  $-4(3 - x) = 11(4x - 3)$

2.  $\frac{1}{2}(8n - 2) = 16 - 30n$

3.  $6\left(\frac{3}{2}x + 1\right) = -9\left(\frac{1}{3}x - 2\right)$

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### Example Set: C

**Solve the equations- show all work:**

1.  $2(y - 4) + 3(y - 10) = 10y + 16$

2.  $\frac{4}{9}x = 6(x + 6) + x$

3.  $70 = \frac{2}{3}m + \frac{1}{9}$

### Example Set: D

**Solve the equation- show all work:**

1.  $7(9.63x - .32) - 5.12 = -2(67.28x + 3.01)$

### Example Set: E

1. On a vacation you are told the outside temperature is 75 degrees Fahrenheit. Given the conversion formula below determine how warm it is outside in Celsius.

$$F = \frac{9}{5}C + 32$$

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### Example Set: A -**ANSWER KEY**

**Solve the equations- show all work:**

1.  $8(y - 4) = 10$   $y = 5.25$

2.  $5(x + 6) = 2x$   $x = -10$

3.  $-6x + 8 = 4x - 12$   $x = 2$

4.  $2(x + 6) = 9(x - 1)$   $x = 3$

5.  $15x + 21 - x = 10x - 9$   $x = -7.5$

### Example Set: B- **ANSWER KEY**

**Solve the equations- show all work:**

1.  $-4(3 - x) = 11(4x - 3)$   $x = \frac{21}{40}$

2.  $\frac{1}{2}(8n - 2) = 16 - 30n$   $n = \frac{1}{2}$

3.  $6\left(\frac{3}{2}x + 1\right) = -9\left(\frac{1}{3}x - 2\right)$   $x = 1$

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### Example Set: C-ANSWER KEY

**Solve the equations- show all work:**

1.  $2(y - 4) + 3(y - 10) = 10y + 16$   $y = -10.8$

2.  $\frac{4}{9}x = 6(x + 6) + x$   $x = -5.49$

3.  $70 = \frac{2}{3}m + \frac{1}{9}$   $m = 104.83$

### Example Set: D-ANSWER KEY

**Solve the equation- show all work:**

1.  $7(9.63x - .32) - 5.12 = -2(67.28x + 3.01)$   $x = .00663$

### Example Set: E-ANSWER KEY

2. On a vacation you are told the outside temperature is 75 degrees Fahrenheit. Given the conversion formula below determine how warm it is outside in Celsius.  $23.8^{\circ}\text{C}$

$$F = \frac{9}{5}C + 32$$