

Homework 2.2

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Solve each equation.

1) $3(n + 4) + 8n = 5n - 36$

2) $3m + 21 = 4(m + 4)$

3) $-6(4 + 2x) - 7x = x - 24$

4) $-5(x - 2) = -(2 - x)$

5) $-8(-4 - 4x) + 8(-7 - 3x) = -3x + 5x$

6) $4(6r - 1) = -4(4 - 7r)$

Solve each proportion.

7) $\frac{-5x - 23}{2} = 5 - x$

8) $\frac{9r - 49}{7} = r - 5$

9) $b + 2 = \frac{11 - b}{4}$

Solve each equation.

$$10) \quad 4.1 - 0.2(-5.5k - 2.3) = 2.2k + 9.73$$

$$11) \quad 4.59 - 4.9v = -5.5(-3.6 + 1.6v)$$

$$12) \quad 5.9(1 - 0.3a) - 2.8 = -12.214 - 5.8a$$

**Find the mistake that was made when solving each equation. Explain why the work shown is incorrect.
Solve each equation correctly.**

$$13) \quad -92 = x - 4(5x + 4)$$

$$-92 = x - 20x - 16$$

$$-92 = 21x - 16$$

$$-76 = 21x$$

$$-3.619$$

$$14) \quad -114 = 6(4n - 3)$$

$$-114 = 10n - 9$$

$$-105n = 10n$$

$$-10.5 = n$$

$$15) \quad 69 = -2(6x - 1) - 5$$

$$69 = -12x + 2 - 5$$

$$69 = -12x - 3$$

$$72 = -12x$$

$$6 = x$$

Answers to Homework 2.2

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|----------------------|----------------|---------------|----------------|
| 1) $\{-8\}$ | 2) $\{5\}$ | 3) $\{0\}$ | 4) $\{2\}$ |
| 5) $\{4\}$ | 6) $\{3\}$ | 7) $\{-11\}$ | 8) $\{7\}$ |
| 9) $\{\frac{3}{5}\}$ | 10) $\{-4.7\}$ | 11) $\{3.9\}$ | 12) $\{-3.8\}$ |
| 13) $\{4\}$ | 14) $\{-4\}$ | 15) $\{-6\}$ | |