

Multi-Step Equations

Name _____

Solve each equation. Show all work clearly and circle your final answer. Equations may have one solution, no solution, or be an identity with infinite solutions.

1) $-\frac{1}{2}(x+4) = 18$

2) $-42 = -\frac{3}{4}(f-4)$

3) $3(z-5) + 17 = -4$

4) $\frac{1}{3}(15-6p) = 4-2p$

5) $\frac{9-2y}{3} = y$

6) $3(w+5) - 6 = 3(3+w)$

Objective: Students will solve multi-step equations having one solution, no solution, or infinite solutions.

$$7) \quad 7 - (2n + 1) = 8n$$

$$8) \quad 6g - 2(2 - g) = 4(2g - 1)$$

$$9) \quad 3 + 4(t + 2) = 2t - 3(t + 4)$$

$$10) \quad 5k + 3[1 - 2(k + 1)] = 2k$$

$$11) \quad 3(j + 2) - j = 2(j + 1)$$

$$12) \quad 8 + e = \frac{1}{5}e + \frac{4}{5}(e - 10)$$

Check: If you have solved all twelve equations correctly, there should be 3 with no solution, 2 identities, and the sum of those with one solution should be 14.8.

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