

**Solving Multi-Step Equations****Solve each equation.**

1)  $4n - 2n = 4$

2)  $-12 = 2 + 5v + 2v$

3)  $3 = x + 3 - 5x$

4)  $x + 3 - 3 = -6$

5)  $-12 = 3 - 2k - 3k$

6)  $-1 = -3r + 2r$

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

8)  $-3(4r - 8) = -36$

9)  $24 = 6(-x - 3)$

10)  $75 = 3(-6n - 5)$

$$11) -3(1 + 6r) = 14 - r$$

$$12) 6(6v + 6) - 5 = 1 + 6v$$

$$13) -4k + 2(5k - 6) = -3k - 39$$

$$14) -16 + 5n = -7(-6 + 8n) + 3$$

$$15) 10p + 9 - 11 - p = -2(2p + 4) - 3(2p - 2)$$

$$16) -10n + 3(8 + 8n) = -6(n - 4)$$

$$17) 10(x + 3) - (-9x - 4) = x - 5 + 3$$

$$18) 12(2k + 11) = 12(2k + 12)$$

$$19) -12(x - 12) = -9(1 + 7x)$$

$$20) -11 + 10(p + 10) = 4 - 5(2p + 11)$$

**Critical thinking question:**

21) Explain two ways you could solve  $20 = 5(-3 + x)$

**Solving Multi-Step Equations**

Date \_\_\_\_\_ Period \_\_\_\_

**Solve each equation.**

1)  $4n - 2n = 4$

{2}

2)  $-12 = 2 + 5v + 2v$

{-2}

3)  $3 = x + 3 - 5x$

{0}

4)  $x + 3 - 3 = -6$

{-6}

5)  $-12 = 3 - 2k - 3k$

{3}

6)  $-1 = -3r + 2r$

{1}

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

{-4}

8)  $-3(4r - 8) = -36$

{5}

9)  $24 = 6(-x - 3)$

{-7}

10)  $75 = 3(-6n - 5)$

{-5}

$$11) -3(1 + 6r) = 14 - r$$

{-1}

$$12) 6(6v + 6) - 5 = 1 + 6v$$

{-1}

$$13) -4k + 2(5k - 6) = -3k - 39$$

{-3}

$$14) -16 + 5n = -7(-6 + 8n) + 3$$

{1}

$$15) 10p + 9 - 11 - p = -2(2p + 4) - 3(2p - 2)$$

{0}

$$16) -10n + 3(8 + 8n) = -6(n - 4)$$

{0}

$$17) 10(x + 3) - (-9x - 4) = x - 5 + 3$$

{-2}

$$18) 12(2k + 11) = 12(2k + 12)$$

No solution.

$$19) -12(x - 12) = -9(1 + 7x)$$

{-3}

$$20) -11 + 10(p + 10) = 4 - 5(2p + 11)$$

{-7}

**Critical thinking question:**

21) Explain two ways you could solve  $20 = 5(-3 + x)$

(1) Divide by 5 first, or (2) Distribute the 5 first.