

Algebra A

Practice Packet

Name: _____

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Using the Distributive Property

Date _____ Period _____

Simplify each expression.

1) $-6(\overbrace{a+8})$

$$-6a - 48$$

2) $4(1 + 9x)$

3) $6(-5n + 7)$

4) $(9m + 10) \cdot 2$

5) $(-4 - 3n) \cdot -8$

6) $8(-b - 4)$

7) $(1 - 7n) \cdot 5$

8) $-6(x + 4)$

9) $5(3m - 6)$

10) $(-6p + 7) \cdot -4$

11) $5(b - 1)$

12) $(x + 9) \cdot 5$

$$13) -4(-8x - 8)$$

$$14) -6(7 + x)$$

$$15) -3(x - 5)$$

$$16) -5(10x + 1)$$

$$17) (1 + 2v) \cdot 5$$

$$18) -8(1 - 5x)$$

$$19) -7(5k - 4)$$

$$20) -5(7a - 6)$$

$$21) 5(n + 6)$$

$$22) 4(3r - 8)$$

$$23) 3(5 + 5x)$$

$$24) (1 + 9x) \cdot -10$$

Combining Like Terms

Date _____ Period _____

Simplify each expression.

1) $\boxed{-6k} + \boxed{7k}$

$$1k$$

2) $12r - 8 - 12$

3) $n - 10 + 9n - 3$

4) $-4x - 10x$

5) $-r - 10r$

6) $\boxed{-2x} + 11 \boxed{+ 6x}$

$$4x + 11$$

7) $11r - 12r$

8) $-v + 12v$

9) $-8x - 11x$

10) $4p + 2p$

11) $5n + 11n$

12) $n + 4 - 9 - 5n$

13) $12r + 5 + 3r - 5$

14) $-5 + 9n + 6$

$$15) n - 4 - 9$$

$$16) 4n - n$$

$$17) -3x - 9 + 15x$$

$$18) -9k + 8k$$

$$19) -16n - 14n$$

$$20) 15n - 19n$$

$$21) -4 + 7(\overset{\curvearrowright}{1} - \overset{\curvearrowright}{3m}) \quad \begin{array}{l} \text{Distribute first} \\ \text{combine next} \end{array}$$

$$\boxed{-4} \boxed{+7} - 21m$$

$$3 - 21m$$

$$22) -5n + 3(6 + 7n)$$

$$23) -2n - (9 - 10n)$$

$$24) 10 - 5(9n - 9)$$

$$25) 9a + 10(6a - 1)$$

$$26) -9(6m - 3) + 6(1 + 4m)$$

$$27) -10(1 - 9x) + 6(x - 10)$$

$$28) 5(-2n + 4) + 2(n + 3)$$

$$29) -3(10b + 10) + 5(b + 2)$$

$$30) -7(n + 3) - 8(1 + 8n)$$

One-Step Equations

Date _____ Period _____

Solve each equation.

$$1) \begin{array}{r|l} 26 & 8 + v \\ -8 & -8 \\ \hline 18 & = v \end{array}$$

$$2) 3 + p = 8$$

$$3) 15 + b = 23$$

$$4) -15 + n = -9$$

$$5) m + 4 = -12$$

$$6) x - 7 = 13$$

$$7) m - 9 = -13$$

$$8) p - 6 = -5$$

$$9) v - 15 = -27$$

$$10) n + 16 = 9$$

$$11) \begin{array}{r|l} -104 & 8x \\ 8 & 8 \\ \hline -13 & = x \end{array}$$

$$12) 14b = -56$$

$$13) \begin{array}{r|l} -6 & b \\ 18 & 18 \\ \hline -108 & = b \end{array}$$

$$14) 10n = 40$$

$$15) \frac{v}{8} = 2$$

$$16) 16 = \frac{k}{11}$$

$$17) -15x = 0$$

$$18) -17x = -204$$

$$19) 21 = -7n$$

$$20) \frac{m}{4} = -13$$

$$21) -126 = 14k$$

$$22) -143 = -11x$$

$$23) -16 + x = -15$$

$$24) -5 = \frac{a}{18}$$

$$25) -17 = x - 15$$

$$26) n - 8 = -10$$

$$27) \frac{v}{7} = 8$$

$$28) a + 11 = 20$$

$$29) -7 + m = 8$$

$$30) 18 + m = 8$$

Two-Step Equations

Date _____ Period _____

Solve each equation.

$$\begin{array}{l} 1) \quad 6 = \frac{a}{4} + 2 \\ \quad -2 \quad -2 \\ \hline (4) 4 = \frac{a}{4} (4) \\ \hline 16 = a \end{array}$$

$$2) -6 + \frac{x}{4} = -5$$

$$3) 9x - 7 = -7$$

$$4) 0 = 4 + \frac{n}{5}$$

$$5) -4 = \frac{r}{20} - 5$$

$$6) -1 = \frac{5+x}{6}$$

$$7) \frac{v+9}{3} = 8$$

$$8) 2(n+5) = -2$$

$$9) -9x + 1 = -80$$

$$10) -6 = \frac{n}{2} - 10$$

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

$$12) 144 = -12(x+5)$$

$$13) -15 = -4m + 5$$

$$14) 10 - 6v = -104$$

$$15) 8n + 7 = 31$$

$$16) -9x - 13 = -103$$

$$17) \frac{n+5}{-16} = -1$$

$$18) -10 = -10 + 7m$$

$$19) -10 = 10(k-9)$$

$$20) \frac{m}{9} - 1 = -2$$

$$21) 9 + 9n = 9$$

$$22) 7(9+k) = 84$$

$$23) 8 + \frac{b}{-4} = 5$$

$$24) -243 = -9(10+x)$$

Multi-Step Equations

Date _____ Period _____

Solve each equation. Use back or separate paper to show work.

$$\begin{array}{r} 1) \quad -20 = -4x - 6x \\ \quad -20 = -10x \\ \quad \frac{-20}{-10} = \frac{-10x}{-10} \\ \quad 2 = x \end{array}$$

2) $6 = 1 - 2n + 5$

3) $8x - 2 = -9 + 7x$

4) $a + 5 = -5a + 5$

5) $4m - 4 = 4m$

6) $p - 1 = 5p + 3p - 8$

7) $5p - 14 = 8p + 4$

8) $p - 4 = -9 + p$

9) $-8 = -(x + 4)$

10) $12 = -4(-6x - 3)$

11) $14 = -(p - 8)$

12) $-(7 - 4x) = 9$

13) $-18 - 6k = 6(1 + 3k)$

14) $5n + 34 = -2(1 - 7n)$

15) $2(4x - 3) - 8 = 4 + 2x$

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

17) $-(1 + 7x) - 6(-7 - x) = 36$

18) $-3(4x + 3) + 4(6x + 1) = 43$

19) $24a - 22 = -4(1 - 6a)$

20) $-5(1 - 5x) + 5(-8x - 2) = -4x - 8x$