

## Practice with Combining Like Terms

Name \_\_\_\_\_

Class Period \_\_\_\_\_

Simplify each expression:

1.  $5x - 2(5 + 8x)$

$$\underline{5x} - 10 - \underline{16x}$$

$$\boxed{-11x - 10}$$

2.  $7(r + 2) + 8r$

$$\underline{7r} + 14 + \underline{8r}$$

$$\boxed{15r + 14}$$

3.  $-2b - 6(7b - 2)$

$$-2b - 42b + 12$$

$$\boxed{-44b + 12}$$

4.  $7(r + 2) - 8(2r - 6)$

$$\underline{7r} + 14 - \underline{16r} + 48$$

$$\boxed{-9r + 62}$$

5.  $-2(b - 6) - 5(7b - 2)$

$$-2b + 12 - 35b + 10$$

$$\boxed{-37b + 22}$$

6.  $6b^2(1 + 3b) - 2b(-4b^2 - 3)$

$$\begin{array}{l} 6b^2 \cdot 3b^1 \\ 6b^2 + 18b^3 + 8b^3 + 6b \\ -2b \cdot -4b^2 \\ -2b \cdot -3 \end{array}$$

$$\boxed{26b^3 + 6b^2 + 6b}$$

7.  $-7x^2(-7x + 1) + x(1 - 3x)$

$$49x^3 - 7x^2 + x - 3x^2 \quad \begin{array}{l} -7x^2 \cdot -7x \\ x^1 \cdot -3x^1 \end{array}$$

$$\boxed{49x^3 - 10x^2 + x}$$

8.  $-2y^2(-4y + 1) - 5y^2(2 - 3y)$

$$\begin{array}{l} -2y^2 \cdot -4y \\ 8y^3 - 2y^2 - 10y^2 + 15y^3 \\ -5y^2 \cdot -3y \end{array}$$

$$\boxed{23y^3 - 12y^2}$$

9.  $5x^2(y - 8x) - 8x^2(x - 3y)$

$$\underline{5x^2y} - \underline{40x^3} - \underline{8x^3} + \underline{24x^2y}$$

$$\boxed{29x^2y - 48x^3}$$

$$\begin{array}{l} 5x^2 \cdot y \\ 5x^2 \cdot -8x \\ -8x^2 \cdot x \\ -8x^2 \cdot -3y \end{array}$$

10.  $-3x(x - 5) + 5(x + 5)$

$$-3x^2 + 15x + 5x + 25$$

$$\boxed{-3x^2 + 20x + 25}$$

$$* b^1 \cdot b^1 = b^2$$

$$* b^2 \cdot b^1 = b^3$$

$$* 1b + 1b = 2b$$

$$* 2b + 3b = 5b$$

$$* 4b^2 + 3b^2 = 7b^2$$

\* When adding like terms you add the coefficients \*

\* When multiplying add the exponents (Also multiply coefficients)

Like Terms: \*same variable  
\*same exponents

EX:  $7x^2 + 3x^2$

NOT EX:

•  $7x^2 + 3x^3$

•  $7x^2 + 3y^2$