

Lesson Extra Practice:  
Algebraic Expressions

Identify the terms and like terms in the expression

1.  $-3c + 6 + 5c - 2$

$$1. \underbrace{-3c} + \underbrace{6} + \underbrace{5c} + \underbrace{-2}$$

$$\underbrace{(-3c + 5c)} + \underbrace{(+6 - 2)}$$

$$2c + 4$$

$$2c + 4$$

}

$$(+)(+) = +$$

$$(-)(-) = +$$

$$(+)(-) = -$$

$$(-)(+) = -$$

Combine Terms:

$$(+\text{Big}) + (-\text{Small}) = +$$

$$(-\text{Big}) + (+\text{Small}) = -$$

$$(+\text{Big}) - (-\text{Small}) = +$$

$$(-\text{Big}) - (+\text{Small}) = -$$

2.  $4n^2 - 2.3n + 2n^2 - 5.6$

2.  $\underline{4n^2} - \underline{2.3n} + \underline{2n^2} - \underline{5.6}$

$6n^2 - 2.3n - 5.6$



$$3. \frac{1}{5}x^3 - x^3 + 2x$$

$$3. \frac{1}{5}x^3 - 1x^3 + 2x$$

$$\left(\frac{1}{5}x^3 - \frac{5}{5}x^3\right) + 2x$$

$$-\frac{4}{5}x^3 + 2x$$



$$\frac{1}{5} + 2$$

$$\frac{1}{5} + \frac{10}{5}$$

$$\frac{2}{3} + 3$$

$$\frac{2}{3} + \frac{9}{3}$$

4.  $-2.5 + s + 6.4s - 4s^2$

$$4. \quad \underline{-2.5} \quad \underline{+1s} \quad \underline{+6.4s} \quad \underline{-4s^2}$$

$$-2.5 + 7.4s - 4s^2$$

$$\begin{array}{r} 6.4 \\ + 1.0 \\ \hline 7.4 \end{array}$$

Simplify the expression. Then evaluate the expression when  $x = 3$ .

5.  $-7x + 12x$

$$5. \quad \underline{-7x} + \underline{12x}$$

$$5x$$

$$5(3)$$

$$15$$

$$\underline{x = 3}$$

$$-7(3) + 12(3)$$

$$-21 + 36$$

$$15$$

Simplify the expression. Then evaluate the expression when  $x = 3$ .

6.  $6x - 4 + 6 - 2x$

$$b) \quad \underline{6x} - 4 + \underline{6} - \underline{2x} \quad \underline{x=3}$$

$$\underline{6(3)} - 4 + \underline{6} - \underline{2(3)}$$

$$18 - 4 + \cancel{6} - \cancel{6}$$

$$14$$

$$4x + 2$$

$$4(3) + 2$$

$$12 + 2$$

$$14$$

Simplify the expression. Then evaluate the expression when  $x = 3$ .

7.  $3x^2 + 5x - x^2$

$$\begin{aligned}
 & 7. \quad \underline{3x^2} + 5x - \underline{x^2} \\
 & \quad \underline{2(3)^2} + \underline{5(3)} - \underline{1(3)^2} \\
 & \quad \underline{3(9)} + 15 - 9 \\
 & \quad 27 + 15 - 9 \\
 & \quad 33
 \end{aligned}$$

$$\begin{aligned}
 & \quad \underline{x=3} \\
 & \quad 2x^2 + 5x \\
 & \quad \underline{2(3)^2} + \underline{5(3)} \\
 & \quad 18 + 15 \\
 & \quad 33
 \end{aligned}$$

Simplify the expression. Then evaluate the expression when  $x = 3$ .

8.  $x^2 - 3 + (x^2 - x)$

$$\begin{array}{r}
 8. \quad \underline{x^2 - 3} + \underline{(x^2 - x)} \qquad \underline{x=3} \\
 \underline{1x^2 - 3} + \underline{1x^2 - 1x} \\
 2x^2 - 3 - 1x \\
 2(3)^2 - 3 - 1(3) \\
 18 - 3 - 3 \\
 12
 \end{array}$$



Simplify the expression. Then evaluate the expression when  $x = 3$ .

9.  $3 - 2(4 + x) - 7$

$$9. \quad 3 - 2(4 + x) - 7 \quad \underline{x = 3}$$

$$3 - 2(4 + (3)) - 7$$

$$3 - 8 - 6 - 7$$

$$3 - 14 - 7$$

$$-11 - 7$$

$$-18$$

Simplify the expression. Then evaluate the expression when  $x = 3$ .

10.  $\frac{2}{3}x - \frac{1}{2} + 2x - x^2$

Simplify the expression. Then evaluate the expression when  $x = 3$ .

11.  $6x^2 - 4 + 2(x^2 - 3)$

Simplify the expression. Then evaluate the expression when  $x = 3$ .

12.  $3(x^2 + 4) - 4x + 6$