

Lesson Extra Practice:
Algebraic Expressions

Identify the terms and like terms in the expression

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

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

$$(-3c + 5c) + (+6 - 2)$$

$$(2c) + (+4)$$

$$2c + 4$$

Like Terms - same variable, variable has same exponent

Unlike Terms - not the same variable, not the same exponent

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

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

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

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

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

$$2. \quad \begin{array}{cccc} \sqrt{\downarrow} & \sqrt{\downarrow} & \sqrt{\downarrow} & C \downarrow \\ 4n^2 & -2.3n & +2n^2 & -5.6 \end{array}$$

$$(+4n^2 + 2n^2) + (-2.3n) + (-5.6)$$

$$(6n^2) + (-2.3n) + (-5.6)$$

$$6n^2 - 2.3n - 5.6$$

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

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

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

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

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

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

Addition:

1) Signs alike add
keep the same sign

2) Signs unlike subtract
take the sign of the larger

$$(-4) + (2) = -2$$

$$(-4) - (2) =$$

$$(-4) + (+2) = -2$$

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

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

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

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

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

$$\frac{1}{5} - 1$$

$$\frac{1}{5} - \frac{5}{5}$$

$$\frac{1}{5} - \frac{2}{1} = \frac{1}{5} - \frac{10}{5}$$

$$\frac{2}{3} - 7$$

$$\frac{2}{3} - \frac{21}{3}$$

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

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

5. $-7x + 12x$

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

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

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

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

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

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

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

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

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