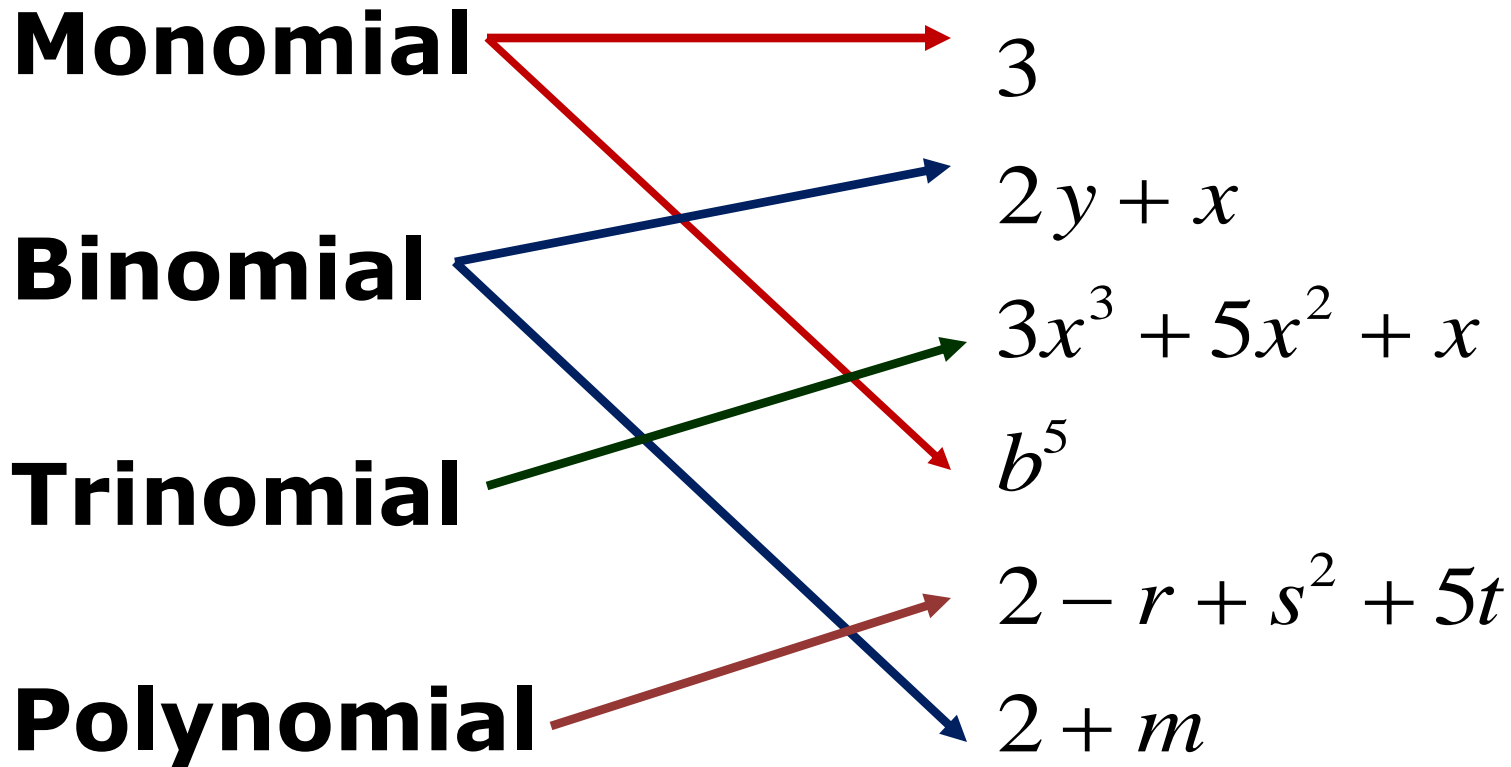


2.1 Adding & Subtracting Polynomials



Match the polynomial with the correct term:



Find $(9y - 7x + 12z) + (-2y + 8x - 5z)$

Step 1: Get rid of the parenthesis by distribution

$$\underline{9y} - \underline{7x} + \underline{12z} - \underline{2y} + \underline{8x} - \underline{5z}$$

Step 2: Collect Like Terms

$$\underline{-7x + 8x} + \underline{9y - 2y} + \underline{5z - 12z}$$

$$x + 7y - 7z$$



Find the sum of the two polynomials below

$$\begin{array}{r} 2x^2 - 5 \\ +3x^2 + 2 \\ \hline \end{array}$$

Make sure that like terms are stacked on one another.

$$\begin{array}{r} 2x^2 - 5 \\ +3x^2 + 2 \\ \hline 5x^2 - 3 \end{array}$$



Solve: $(x^2 + 2x - 5) - (2x^2 + 2)$

1st....Distribute

$$\underline{x^2} + \underline{2x} - 5 - \underline{2x^2} - 2$$

2nd....Combine Like Terms

$$-x^2 + 2x - 7$$



Find the sum of the two polynomials using vertical addition

$$(x - 3z + 2y) + (y - x + 5z)$$

Step 1: Make sure that like terms are stacked on top of each other

$$\begin{array}{r} x + 2y - 3z \\ + \quad -x + y + 5z \\ \hline 3y + 2z \end{array}$$



Match the polynomial to the correct degree. The degree is the highest exponent.

$$x^3 + x^2 - 10 \quad \mathbf{F}$$

$$x^2 - x^4 - 3x + 28 \quad \mathbf{E}$$

$$x \quad \mathbf{C}$$

$$x^6 + 2x + 7 \quad \mathbf{D}$$

A. 5

B. 7

C. 1

D. 6

E. 4

F. 3

G. 2



Subtract $(2x^2 - 4) - (x^2 + 3x - 3)$

Change the subtraction to addition by distributing the negative to each term inside the parentheses.

$$2x^2 - 4 - x^2 - 3x + 3$$

Combine like terms

$$2x^2 - x^2 - 3x + 3 - 4$$

$$x^2 - 3x - 1$$



Find the difference of the two polynomials using vertical subtraction.

$$(3x^2 - 2) - (x^2 + 5x - 3)$$

Make sure that like terms are stacked on top of each other.

$$\begin{array}{r} 3x^2 + 0x - 2 \\ - \color{red}{-}x^2 \color{red}{+}5x \color{red}{-}3 \\ \hline 2x^2 - 5x + 1 \end{array}$$



Subtract $(x^3 - 2x^2 + 7x - 8) - (x^3 + 2x - x^4 + 10)$

$$\begin{array}{ccccccc} \underline{\underline{x^3}} & - & \underline{2x^2} & + & \underline{\underline{7x}} & - & \underline{\underline{8}} & - & \underline{\underline{x^3}} & - & \underline{2x} & + & \underline{x^4} & - & \underline{10} \end{array}$$

$$x^4 - 2x^2 + 5x - 18$$

p. 61 2 – 14 even, 15

p. 62 2 – 12 even

