

Combine Like Terms

$$\underbrace{n^5}_{\text{blue}} - \underbrace{3n^2}_{\text{green}} + \underbrace{6n}_{\text{green}} - 10 + \underbrace{7n^5}_{\text{blue}} - \underbrace{2n}_{\text{green}}$$

$$\boxed{8n^5 - 3n^2 + 4n - 10}$$

Add or Subtract Polynomials

$$(8x^2 - 9x + 17) + (3x^2 + 5x - 6)$$

$$3x^2 + 5x - 6$$

$$8x^2 - 9x + 17$$

$$\boxed{11x^2 - 4x + 11}$$

$$(8x^2 - 9x + 17) - (3x^2 + 5x - 6)$$

$$-3x^2 - 5x + 6$$

$$8x^2 - 9x + 17$$

$$\boxed{5x^2 - 14x + 23}$$

Mixed Practice

1)

$$(10x + 6) - (-3x + 20)$$

$$+ 3x - 20$$

$$10x + 6$$

$$\boxed{13x - 14}$$

3)

$$(y^2 + 3y - 12) - (-8y^2 + 5y - 4)$$

$$+ 8y^2 - 5y + 4$$

$$y^2 + 3y - 12$$

$$\boxed{9y^2 - 2y - 8}$$

2)

$$\underbrace{4n^3}_{\text{blue}} - \underbrace{9n}_{\text{green}} + 18 + \underbrace{7n^3}_{\text{blue}} - \underbrace{6n}_{\text{green}} + 5$$

$$\boxed{11n^3 - 15n + 23}$$

4)

$$(2x^3 - 6x - 10) - (7x^2 - 6x + 8)$$

$$-7x^2 + 6x - 8$$

$$2x^3 - 6x - 10$$

$$\boxed{2x^3 - 7x^2 - 18}$$

5)

$$7 - 9a - (4a + 20) + 15a - 6$$

$$\cancel{7} - \cancel{9a} - \cancel{4a} - \cancel{20} + \cancel{15a} - 6$$

$$-13a + 15a - 13 - 6$$

$$2a - 19$$

7)

$$(k^3 + 6k - 10) + (7k^3 + 4k^2 - k - 8)$$

$$7k^3 + 4k^2 - k - 8$$

$$k^3 + 6k - 10$$

$$8k^3 + 4k^2 + 5k - 18$$

8)

$$(2x^5 - 3x^4 - 9x) - (19x^4 - 7x^5 - 2x + 4)$$

$$-19x^4 + 7x^5 + 2x - 4$$

$$2x^5 - 3x^4 - 9x$$

$$7x^5 - 19x^4 + 2x - 4$$

$$9x^5 - 22x^4 - 7x - 4$$

6)

$$(y^3 - 6y + 13) - (-7y^3 + 5y)$$

$$+7y^3 - 5y$$

$$y^3 - 6y + 13$$

$$7y^3 - 5y$$

$$8y^3 - 11y + 13$$

9)

$$(6y^3 - 8y + 13) - (-2y^3 + y - 7)$$

$$+2y^3 - y + 7$$

$$6y^3 - 8y + 13$$

$$8y^3 - 9y + 20$$

10)

Subtract  $(9y^2 - 5y + 7)$  from  $6y^2 + 12y - 10$ 

$$\begin{array}{r} 6y^2 + 12y - 10 \\ - (9y^2 - 5y + 7) \\ \hline -9y^2 + 5y - 7 \\ 6y^2 + 12y - 10 \\ \hline -3y^2 + 17y - 17 \end{array}$$

11)

Subtract  $(-10y^2 + 4y - 16)$  from  $2y^3 + 15y^2 - 20$ 

$$\begin{array}{r} 2y^3 + 15y^2 - 20 \\ - (-10y^2 + 4y - 16) \\ \hline +10y^2 - 4y + 16 \\ 2y^3 + 15y^2 \qquad -20 \\ \hline 2y^3 + 25y^2 - 4y - 4 \end{array}$$