

# Multiplying Polynomials

- Multiply everything in the first set of parentheses by everything in the second set of parentheses
- Collect Like Terms
- Write answer in descending order

$$\begin{array}{l} \overbrace{6(4x - 3y)} \\ 24x - 18y \end{array}$$

$$\begin{array}{l} \overbrace{12x(2x + 4)} \\ 24x^2 + 48x \end{array}$$

F  
i  
O  
L  
r  
e  
n  
s  
r  
e  
n  
s  
a  
r

$$(2n + 3)(n - 2)$$
$$2n^2 - 4n + 3n - 6$$
$$2n^2 - n - 6$$

$$(5v - 1)(4v + 3)$$
$$20v^2 + 15v - 4v - 3$$
$$20v^2 + 11v - 3$$

$$(2r - 2)(-r - 7)$$
$$-2r^2 - 14r + 2r + 14$$
$$-2r^2 - 12r + 14$$

$$(3x + 5)(3x - 6)$$

$$9x^2 - 18x + 15x - 30$$

$$9x^2 - 3x - 30$$

$$(-4m - 4n)(-6m - 6n)$$

$$24m^2 + 24mn + 24mn + 24n^2$$

$$24m^2 + 48mn + 24n^2$$

$$24m^2 + 24n^2 + 48mn$$

$$(8u + 4v)(6u + 6v)$$

$$48u^2 + 48uv + 24uv + 24v^2$$

$$\boxed{48u^2 + 24v^2 + 72uv}$$

$$(3x - 5)(4x + 6)$$

$$12x^2 + 18x - 20x - 30$$

$$\boxed{12x^2 - 2x - 30}$$

$$(-4x^2 - 5x - 1)(4x^2 - 6x - 2)$$

$$\cancel{-16x^4 + 24x^3 + 8x^2} - \cancel{20x^3 + 30x^2 + 10x} - \cancel{4x^2 + 6x + 2}$$

$$\boxed{-16x^4 + 4x^3 + 34x^2 + 16x + 2}$$