

1.2 Operations with Polynomials

Addition and Subtraction (Tips)

- Only like terms can be added or subtracted
- Coefficients will change, but exponents do not
- Watch for negative signs!
- When subtracting, remember every term inside brackets must be subtracted, for example: $(5x + 10y) - (2y + 3x) =$

Addition and Subtraction (Examples)

1. $(2x + 1) + (x^2 - 4x)$

2. $(2x^4 - 3x + 10) + (x^2 - 1) + (x^4 - x)$

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

4. $(-x^2 + 8x + 100) - (2x^2 - 40)$

5. $(4 + y) - (y - 2y^2) - (2y - y^2)$

6. $(2a^3 - 3a^2 + a) - (2a^3 - 3a^2 + a + 1)$

Multiplication and Division (Tips)

- You can multiply or divide even if they are not like terms
- Exponents will change, coefficients may also change
- Watch for negative signs
- Use distributive property to multiply or divide

Multiplication and Division (Examples)

1. $3(x^2 + 2x + 1)$

2. $4k(k^2 + 2k + 1)$

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

4. $(-2a + 3b)(a^2b + b^2aa)$

5. $(mn - m^2)(-n + m)$

6. $(2x + 6y)(xy + 1 + xz)$

7. $(2a + c)(3c + b)$