Exploring Polynomials

Monomials

Constants

Coefficient

Degree

Power

<u>Laws of Exponents:</u>

Negative Exponents: a^{-n} $\frac{1}{a^{-n}}$

Multiplying Powers: $a^m \ a^n$

Dividing Powers: $\frac{a^m}{a^n}$

Power of a power: $\left(a^m\right)^n$

Power of a product: $(ab)^m$

Power of a quotient: $\left(\frac{a}{b}\right)^n$ $\left(\frac{b}{a}\right)^{-n}$

Power of zero: a^o

Examples using the laws of exponents:

1. $\left(2ab^2\right)\left(-3a^4b^2c\right)$

2. $\left(6x^2y^3\right)\left(-xyz\right)$

3. $\dfrac{x^{12}}{x^4}$

4. $\dfrac{-10x^2y^4}{5xy^4}$

5. $\left(x^2\right)^4$

6. $\left(-2a^3b^2\right)^4$

7. $\left(\dfrac{3x^3y^n}{x^5y^{3n}z^2}\right)^2$

8. $\left(\dfrac{4}{n}\right)^{-3}$

9. $\left(\dfrac{3x^{3b}y}{-6x^by^3}\right)^{-3}$