

March 25, 2015

* Quiz #7 - Friday

- Solving & Checking Equations
- 5.1 Handout

Exponent Rules → Simplifying Exponents

- * Includes negative exponents

* Exam #2 - Next Friday

- Solving Equations
- Exponents & Multiplication

Mar 25-9:01 AM

$$\frac{(2x^8 y^{-9} z^3)^{-2}}{-18 x^{20} y^{-7} z^{-10}}$$

$$\frac{(2^{-2}) \cdot (x^{8 \cdot -2}) \cdot (y^{-9 \cdot -2}) \cdot (z^{3 \cdot -2})}{-18 x^{20} y^{-7} z^{-10}}$$

$$\frac{-18 x^{20} y^{-7} z^{-10}}{-18 \cdot 2^2 \cdot x^{16} \cdot y^{18} \cdot z^{-6}}$$

$$\frac{y^{18} y^7 \cdot z^6}{-18(2)^2 \cdot x^{20} \cdot x^{16} \cdot z^{-6}}$$

$$\frac{y^{25} \cdot z^{10+6}}{-18 \cdot 4 \cdot x^{36}}$$

$$-\frac{y^{25} z^{16}}{72 x^{36}}$$

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Quotient rule

$$\frac{x^{-16}}{x^{20}} = x^{-16-20} = x^{-36} = \frac{1}{x^{36}}$$

negative exp rule

Negative exp rule

$$\frac{x^{-16}}{x^{20}} = \frac{1}{x^{20} \cdot x^{16}} = \frac{1}{x^{36}}$$

Product rule

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$2x^2 + 3x$ unlike!

To Combine like terms

- same variable
- same exponent

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5.2

Polynomials

- Term: is a number or variable or a product of a number & a variable
 $5, x, y^2, 2x, -3xy$
- Monomial: a single term
 $3x, 2, -16y^4$
- Binomial: Combining two terms (monomials) with addition
 $x+3, 2x-4, x+y$
- Trinomial: Combining three terms
 $2x^2 - 5x + 4, -a + by - c$
- Polynomial: Combining many terms
 $6x^4 + 4x^7 - 2x^6 + 6x^2 - 2x + 5$

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Degree of Polynomials

- the "Degree" is determined by the largest exponent value.

$$3x^3 + 2x^2 - 5x + 2x^0$$

Degree: 3 polynomial

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

Not in correct form!

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