November 9, 2015

* Quiz on Wednesday
  * Factoring Special Cases
  * Solving Equations by factoring
* No Class November 20th !
* Exam # 3 – November 30 !

Nov 9-9:03 AM

7.3 Simplifying Rational Expressions

$\frac{a}{b}$ → Fractions

Simplify Polynomials

$\frac{P(x)}{Q(x)} \rightarrow \frac{P}{Q} \cdot \frac{R}{R}$ "one"

$= \frac{PR}{QP} = \frac{P}{Q}$

$\frac{a}{b} \cdot \frac{c}{c} = \frac{ac}{bc} = \frac{a}{b}$ "one"

Nov 9-9:16 AM

Example

① $\frac{2x}{3y} \cdot \frac{6y^2}{4x^3}$

② $\frac{8x^2+4}{4} \cdot \frac{x+2}{x^2-4}$

Nov 9-9:22 AM

Simplifying

Multiplication → $\frac{P}{Q} \cdot \frac{S}{T}$

$\frac{25x}{2} \cdot \frac{1}{y^3} = \frac{25x}{2y^3}$

Steps

① Factor anything that can be factored

② Divide out any common factors

Nov 9-9:25 AM

$\frac{x^2-9}{x^2+x-6} = \frac{(x+3)(x-3)}{(x+3)(x-2)}$ "one"

$= \frac{x-3}{x-2}$

Nov 9-9:31 AM

$\frac{-7x^2}{5y} \cdot \frac{3y^4}{14x^2} = \frac{-21x^2y^4}{70yx^2}$

$= \frac{-3y^4}{10}$

$= -\frac{3y^4}{10}$

$\frac{-1}{5} \cdot \frac{3y^4}{2}$

$-\frac{3y^4}{10}$

Nov 9-9:36 AM

$$\frac{x^2+x}{3x} \cdot \frac{6}{5x+5} = \frac{6x^2+6x}{15x^2+15}$$

Don't do this

① * Factor 1st

$$\frac{x(x+1)}{3x} \cdot \frac{6}{5(x+1)}$$

② Divide Common Factors

$$\frac{1}{3} \cdot \frac{2}{5} = \frac{1}{1} \cdot \frac{2}{5} = \frac{2}{5}$$

Nov 9-9:42 AM

$$\frac{3x+3}{5x-5x^2} \cdot \frac{2x^2+x-3}{4x^2-9}$$

$$\frac{3(x+1)}{5x(1-x)} \cdot \frac{(2x+3)(x-1)}{(2x+3)(2x-3)}$$

$$\frac{3(x+1)}{5x(1-x)} \cdot \frac{(x-1)}{(2x-3)}$$

Read 7.3

Nov 9-9:47 AM