

Daily Agenda

Learning Target: I can simplify rational expressions.

Homework Assessments  
 5.1 Worksheet 5.1 to 5.2 Quiz 11/21

polynomial  
polynomial

It takes courage to grow up and become who you really are.  
-e.e. Cummings

Nov 15-8:24 PM

Warm up

Simplify each expression

$$\frac{3}{8} \cdot \frac{4}{9} = \frac{12}{72}$$

$$\frac{1}{6}$$

$$\frac{12}{5} \div \frac{16}{75}$$

$$\frac{45}{4}$$

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5.1 Simplify Rational Expressions

To simplify rational expressions, factor first

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

$$\frac{2}{\cancel{x-2}} \cdot \frac{(x+2)\cancel{(x-2)}}{4}$$

$\frac{x+2}{2}$

$$\frac{x^2-64}{x^2-16} \div \frac{x+8}{x+4}$$

$$\frac{(x-8)\cancel{(x+8)}}{(x-4)\cancel{(x+4)}} \cdot \frac{\cancel{(x+4)}}{(x+8)}$$

$\frac{x-8}{x-4}$

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$$\frac{x+y}{x-y} \div \frac{y+x}{y-x}$$

$$\frac{\cancel{(x+y)}}{(x-y)} \cdot \frac{\cancel{(y-x)}}{(y+x)}$$

$$\frac{y-x}{x-y} = \frac{-1(y+x)}{\cancel{(x-y)}} = -1$$

$$\frac{x^2-3x-4}{3+x} \cdot \frac{x+3}{16-x^2}$$

$$\frac{(x-4)(x+1)}{(3+x)} \cdot \frac{(x+3)}{-1(x^2-16)}$$

$$\frac{(x-4)(x+1)}{(3+x)} \cdot \frac{(x+3)}{-1(x+4)(x-4)}$$

$\frac{x+1}{-(x+4)}$

$= -\frac{x+1}{x+4}$

$= \frac{x+1}{-x-4}$

$\frac{-x-1}{x+4}$

Dec 6-8:47 PM

Final Thoughts...

Summarize how we simplify rational expressions

Dec 7-6:41 AM