Today's Learning Goal(s):

Date: Feb. 12/18
(Every lesson)

By the end of the class, I will be able to:

a) multiply or divide two rational expressions and state the restrictions.

2.6 Multiplying and Dividing Rational Expressions

Ex.1 Simplify. State any restrictions on the variables.

a) $\frac{18}{15} \times \frac{25}{16}$

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

$= \frac{5}{6}$

b) $\frac{12x^2}{5y^3} \times \frac{15y^3}{8x}$

$= \frac{3x3}{1x2} x^{2-1} y^{1-3}$

$= \frac{9}{2} x y^{-2}$

$= \frac{9}{2} x \left(\frac{1}{y}\right)^2$

$= \frac{9}{2} x \frac{1}{y^2}$

$= \frac{9x}{2y^2}$

Restrictions: $y \neq 0, x \neq 0$

c) $\frac{4x+8}{5x^3} \div \frac{6x+12}{25x}$

$= \frac{4x+8}{5x^3} \times \frac{25x}{6x+12}$

$= \frac{4(x+2)}{5x^3} \times \frac{25x}{6(x+2)}$

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

$= \frac{10}{3x^2}$

$x+2 \neq 0$

$x \neq -2$

R: $x \neq 0, x \neq -2$

Simplify. State any restrictions on the variables.

d) $\dfrac{x^2-x-12}{2x^2-9x+4} \div \dfrac{5x^2-45}{2x^2+11x-6}$

$= \dfrac{(x-4)(x+3)}{(2x-1)(x-4)} \div \dfrac{5(x^2-9)}{(2x-1)(x+6)}$

$= \dfrac{(x-4)(x+3)}{(2x-1)(x-4)} \times \dfrac{(2x-1)(x+6)}{5(x-3)(x+3)}$

$= \dfrac{x+6}{5(x-3)}$ R: $x \neq 3, -6, 4, \frac{1}{2}, -3$

Are there any Homework Questions you would like to see on the board?

Last day's work: pp. 112-114 #(1 – 7)ace, 10 [16, 17]

10 6

Today's Homework Practice includes:

pp. 122-123 #(4 – 7)ac, 8, 9, 11 [13]

Discuss SWYK 1.1 (Return and Correct?)

Please put your name at the top of each page, and submit:

Tuesday Wednesday

p.113 10b)

$$\frac{5(4x-2)}{8(2x-1)^2}$$

$$= \frac{5(2)(2x-1)}{8(2x-1)(2x-1)}$$

$$= \frac{5}{4(2x-1)}$$

R: $2x-1 \neq 0$

$2x \neq 1$

$x \neq \frac{1}{2}$