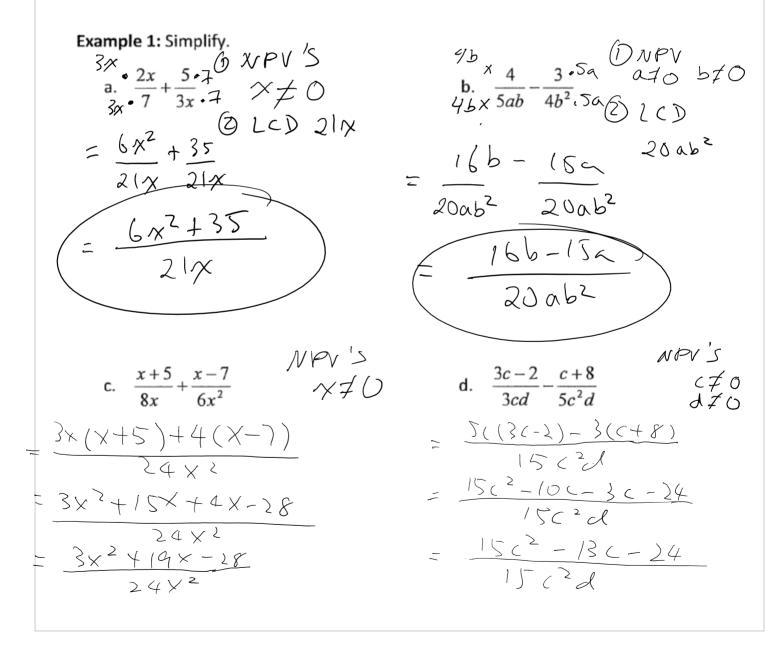# 7.3

Thursday, May 5, 2016   10:28 AM

Pre-Calculus
7.3 Adding & Subtracting Rational Expressions with Monomial Denominatiors
Name: _____

The strategies for adding and subtracting rational numbers cans be used to add and

subtract __rational expressions.__

1. Identify the non-permissible values of the variables

2. Write the expression with a common denominator

3. Add or Subtract the Numerators

Example 1: Simplify.

a. $\dfrac{3x}{3x} \cdot \dfrac{2x}{7} + \dfrac{5 \cdot 7}{3x \cdot 7}$ ① NPV'S

$x \neq 0$

② LCD 21x

$= \dfrac{6x^2}{21x} + \dfrac{35}{21x}$

$= \dfrac{6x^2 + 35}{21x}$

b. $\dfrac{4b}{4bx} \cdot \dfrac{4}{5ab} - \dfrac{3 \cdot 5a}{4b^2 \cdot 5a}$ ① NPV $a \neq 0$ $b \neq 0$

② LCD

$20ab^2$

$= \dfrac{16b}{20ab^2} - \dfrac{15a}{20ab^2}$

$= \dfrac{16b - 15a}{20ab^2}$

c. $\dfrac{x+5}{8x} + \dfrac{x-7}{6x^2}$ NPV'S $x \neq 0$

$= \dfrac{3x(x+5) + 4(x-7)}{24x^2}$

$= \dfrac{3x^2 + 15x + 4x - 28}{24x^2}$

$= \dfrac{3x^2 + 19x - 28}{24x^2}$

d. $\dfrac{3c-2}{3cd} - \dfrac{c+8}{5c^2d}$ NPV'S $c \neq 0$ $d \neq 0$

$= \dfrac{5c(3c-2) - 3(c+8)}{15c^2d}$

$= \dfrac{15c^2 - 10c - 3c - 24}{15c^2d}$

$= \dfrac{15c^2 - 13c - 24}{15c^2d}$

e. $\overset{6a^2}{\left(\dfrac{5}{2}\right)}\overset{3}{-\dfrac{3}{4a^2}}+\overset{4a}{\left(\dfrac{2}{3a}\right)}$ NPV $a \neq 0$

LCD $12a^2$

$= \dfrac{30a^2 - 9 + 8a}{12a^2}$

$= \dfrac{30a^2 + 8a - 9}{12a^2}$

f. $\overset{3}{\left(\dfrac{2z+1}{8z^2}\right)}\overset{8z}{+}\overset{}{\left(\dfrac{4z-4}{3z}\right)}\overset{4z}{-\left(\dfrac{8-z}{6}\right)}4z^2$ NPV $z \neq 0$

LCD $\rightarrow 24z^2$

$= \dfrac{6z+3}{24z^2} + \dfrac{32z^2 - 32z}{24z^2} - \dfrac{32z^2 + 4z^3}{24z^2}$

$= \dfrac{4z^3 - 26z + 3}{24z^2}$

Assignment p.553-555 #3ac, 5-9, 12ac, 13

7.1 - 7.2 Monday