

November 27, 2017  
 \* Exam #3 - December 6  
 \* Final Exam - Wednesday  
 December 13  
 8-10

Nov 27-9:05 AM

7.4 Solving Rational Equations

$$m^2 \left[ \frac{4}{m^2} = \frac{5}{m} - \frac{1}{m^2} \right]$$

Steps  
 ① find LCD  $m^2$   
 ② Clear fractions w/ LCD

$$\frac{\cancel{m^2}}{1} \cdot \frac{4}{\cancel{m^2}} = \frac{\cancel{m^2}}{1} \cdot \frac{5}{\cancel{m}} - \frac{\cancel{m^2}}{1} \cdot \frac{1}{\cancel{m^2}}$$

$$4 = 5m - 1 \quad \text{Chk}$$

$$5 = 5m$$

$$\boxed{1 = m} \quad m = 1$$

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

$$4 = 5 - 1$$

$$4 = 4 \checkmark$$

Nov 27-9:12 AM

LCM:  $6x^2$

$$6x^2 \left[ \frac{1}{3x^2} = \frac{x+3}{2x^2} - \frac{1}{6x^2} \right]$$

$$2 = 3x + 9 - 1 \quad \text{Chk}$$

$$3 = 3x + 9$$

$$-6 = 3x$$

$$\boxed{-2 = x}$$

$$\frac{1}{3(-2)^2} = \frac{(-2)+3}{2(-2)^2} - \frac{1}{6(-2)^2}$$

$$\frac{1}{12} = \frac{1}{8} - \frac{1}{24}$$

$$= \frac{3-1}{24}$$

$$= \frac{2}{24}$$

$$\frac{1}{12} = \frac{1}{12} \checkmark$$

Nov 27-9:19 AM

LCM:  $x^2$

$$x^2 \left( \frac{6x+18}{x^2} + \frac{1}{x} = \frac{3}{x} \right)$$

$$6x+18+x = 3x$$

$$7x+18 = 3x$$

$$4x = -18$$

$$x = -\frac{18}{4}$$

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

$$\frac{6(-\frac{9}{2})+18}{(-\frac{9}{2})^2} + \frac{1}{(-\frac{9}{2})} = \frac{3}{(-\frac{9}{2})}$$

$$\frac{-27+18}{\frac{81}{4}} + \left[ + \cdot - \right] = \left[ \frac{3}{1} \cdot - \right]$$

$$\frac{-9}{1} \cdot \frac{4}{81} + -\frac{2}{9} = -\frac{2}{3}$$

$$-\frac{6}{9} + \left( -\frac{2}{9} \right)$$

$$\frac{-4+(-2)}{9}$$

$$\frac{-6}{9}$$

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

Nov 27-9:30 AM