Name:	Date:
Topic:	Class:

Main Ideas/Questions	Notes/Examples	
Solving Rational Equations	**METHOD 1:** Proportions	**METHOD 2:** Using an LCD
	Condense into a proportion. Then, cross-multiply to solve.	Multiply each side of the equation by the least common denominator. Solve the resulting equation.
	ALWAYS REMEMBER TO CHECK YOUR SOLUTIONS!	

Directions: Solve each equation. Check all solutions

1. $\frac{7}{x-6} = \frac{4}{x}$

$7x = 4(x-6)$

$7x = 4x - 24$

$-4x \quad -4x$

$3x = -24$

$\boxed{x = -8}$

~~$-8, 6$~~

2. $\frac{3}{a-8} = \frac{7}{2a+1}$

$3(2a+1) = 7(a-8)$

$6a + 3 = 7a - 56$

$-3 \quad -3$

$6a = 7a - 59$

$-7a \quad -7a$

$-a = -59$

$\boxed{a = 59}$

3. $\frac{r}{r-1} = \frac{4}{r}$

$r^2 = 4(r-1)$

$r^2 = 4r - 4$

$r^2 - 4r + 4 = 0$

$(r-2)(r-2) = 0$

$\boxed{r = 2 \text{ (mult. 2)}}$

4, -2, -2, -4

4. $\frac{m+3}{3} = \frac{8}{m-2}$

$(m+3)(m-2) = 24$

$m^2 - 2m + 3m - 6 = 24$

$-24 \quad -24$

$m^2 + m - 30 = 0$

$(m+6)(m-5) = 0$

$\boxed{m = -6, 5}$

-30, -5, 6, 1

5. $\frac{y}{3} = \frac{y+8}{y+5}$

-36, -4, 9, 5

6. $\frac{2x-3}{2} = \frac{3}{x+4}$

$(2x-3)(x+4) = 6$

$2x^2 + 8x - 3x - 12 = 6$

$-6 \quad -6$

$2x^2 + 5x - 18 = 0$

$(2x^2 - 4x) + (9x - 18) = 0$

$2x(x-2) + 9(x-2) = 0$

$(x-2)(2x+9) = 0$

$\boxed{x = 2, -9/2}$