Algebra 2
Unit 3 WS4

Name:_____
Date:_____
Period:_____

Directions: Please answer the following questions. **Show work!!**
Perform the indicated operation.   Don't forget to list the restrictions.

1. $\dfrac{8}{2x-10} - \dfrac{10}{3x-15}$

2. $\dfrac{\dfrac{x^2+7x-60}{3x^2-15x}}{\dfrac{x^2+5x-84}{x^3-7x^2}}$

3. $\dfrac{5}{4x} + \dfrac{7}{12x}$

4. $\dfrac{64x^2-25}{8x^2+11x-10}$

5. $\dfrac{x-2}{4x^2+20x} \bullet \dfrac{x^2-x-30}{3x-6}$

6. $\dfrac{7+3x}{x^2-100} - \dfrac{2x-3}{x^2-100}$

7. $\dfrac{5x^2 - 15x}{10x^2} \div \dfrac{x^2 - 11x + 24}{7x - 56}$

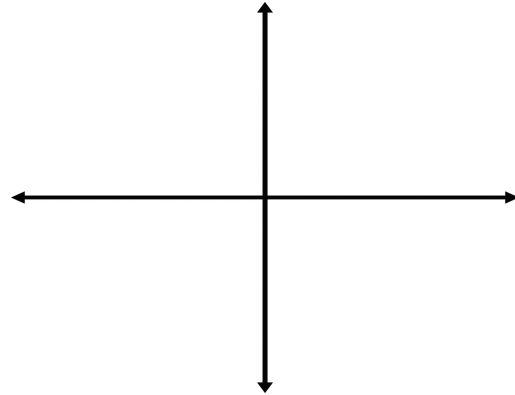8. $\dfrac{6 - 2x}{x^2 + 6x + 5} + \dfrac{4}{x + 5}$

9. Write an example of a polynomial equation with an even degree and whose graph would end pointing upwards.

10. Sketch a polynomial with a degree of 8, 2 real roots and a negative leading coefficient.

    # of Imaginary Roots:

    # of relative minimum(s):

    # of relative maximum(s):

11. Perform the indicated operation, put the polynomial in standard form and fill in the blanks below.

$$(2 + 3x^2 - 6x)(2 + x)$$

Standard form:

Degree:

Leading coefficient:

Circle one: monomial   binomial   trinomial   polynomial