Algebra 2 Name _____

Operations with Rational Functions Practice Test Date _____

Perform the indicated operation. Make sure your answer is in simplest form.

1. $\frac{2}{x-2} - \frac{9}{x+3}$

2. $\frac{2}{5x^2-15x} - \frac{x}{x^2-x-6}$

3. $\frac{5}{x^2+6x+9} + \frac{3x}{x^2-9}$

4. $\frac{x}{x+3} + \frac{2}{x-3} - \frac{x+9}{x^2-9}$

5. $\frac{72x-12x^2}{8x+32} \cdot \frac{x^2+10x+24}{x^2-36}$

6. $\frac{x^2-64}{3x^2+26x+16} \div \frac{x^2-4x-32}{15x+10}$

7. $\frac{x^2-16}{x^2+3x+2} \cdot \frac{2x^2+12x+16}{x^2+2x-8}$

Solve the Following Rational Equations

8. $\frac{5}{x-3} = \frac{9}{x+2}$

9. $\frac{3}{x^2-4} = \frac{1}{x-2} + \frac{1}{x+2}$

10. $\frac{x-15}{x^2-9x+18} = \frac{4}{x-3} + \frac{2}{x-6}$

11. $\frac{3}{x+8} - \frac{2}{x-2} = 1$

Simplify the Complex Fraction:

12. $$\frac{\frac{4y}{y+5}+\frac{2}{y+6}}{\frac{3y}{y^2+11y+30}}$$

13. $$\frac{\frac{n}{m}+\frac{1}{n}}{\frac{1}{n}-\frac{n}{m}}$$