

Name _____

Rational Expression Worksheet Review #17: All operations

Simplify (*remember to factor when necessary*).

1. $\frac{120x^3y}{25xy^5}$

2. $\frac{x^2 + 9x + 20}{2x + 8}$

3. $\frac{x^2 - x - 12}{x^2 - 2x - 8}$

Multiply or divide (*remember to factor when necessary*).

4. $\frac{5n+15}{4n+8} \cdot \frac{2n+4}{3n+9}$

5. $\frac{x^2 - x - 12}{x - 4} \div \frac{2x + 6}{x - 5}$

6. $\frac{x+3}{10x+20} \cdot \frac{x+2}{x^2+4x+3}$

Add or subtract these rational expressions.

7. $\frac{5}{12x} - \frac{3}{4}$

8. $\frac{4}{7x-35} + \frac{5}{x-5}$

Solve each equation for x . **SHOW WORK!**

9. $\frac{3x}{x+7} - \frac{8}{2(x+7)} = \frac{-22}{x+7}$

10. $\frac{2}{x-6} + \frac{7}{x+2} = \frac{4x+2}{x^2-4x-12}$