

Name _____

Rational Expression Worksheet #4: Multiplying

Multiply the expressions (*remember to factor when necessary*).

1. $\frac{12x^3}{25} \cdot \frac{40}{9x^2}$

2. $\frac{6}{x^2 - 9x + 20} \cdot \frac{5x - 25}{15}$

3. $\frac{6x - 18}{4x^2} \cdot \frac{x^3}{2x - 6}$

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

5. $\frac{5}{x + 1} \cdot \frac{x^2 - 6x - 7}{3x - 21}$

6. $\frac{9x + 18}{x^2 - 2x - 8} \cdot \frac{3x - 12}{6x}$

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Rational Expression Worksheet #5: Multiplying & Dividing

Multiply or divide these rational expressions. Show work and **FACTOR!!**

1. $\frac{2a^2b}{b^2c} \cdot \frac{b}{a}$

2. $\frac{y^2 - 2y - 15}{4} \cdot \frac{8}{y+3}$

3. $\frac{x-5}{6} \div \frac{2x-10}{12}$

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

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

6. $\frac{m^2 - 2m - 8}{8m+24} \div \frac{2m-8}{m^2 + 7m + 12}$

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

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

9. $\frac{x^2 - 5x - 6}{5x+15} \div \frac{x^2 - 3x - 4}{7x+21}$

10. $\frac{24x^3}{25y^5} \cdot \frac{15y^2}{8x^2}$

11. $\frac{6x-18}{4x} \cdot \frac{x}{2x-6}$

12. $\frac{3x+12}{12x} \div \frac{x+4}{48x^3}$

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Rational Expression Worksheet #6: Multiplying & Dividing

Multiply or divide the rational expressions. Show work & factor when necessary.

1. $\frac{2x+6}{5x+10} \cdot \frac{x+2}{x^2+4x+3}$

2. $\frac{x^2-x-12}{3x-9} \div \frac{x-4}{12}$

3. $\frac{x^2-5x+4}{x^2} \div \frac{x-1}{x}$

4. $\frac{6}{x^2+9x+20} \cdot \frac{8x+40}{6x-12}$

5. $\frac{5x-15}{4x^2} \cdot \frac{x^3}{6x-18}$

6. $\frac{7x^2}{12x} \div \frac{14x^3}{48y^3}$

7. $\frac{x^2+5x-24}{2x+2} \div \frac{3x+24}{x^2-8x-9}$

8. $\frac{24x^3}{50x} \cdot \frac{30}{8x^2}$

9. $\frac{4x}{8x+8} \cdot \frac{x^2+8x+7}{8x^3}$

10. $\frac{6x-12}{x^2-9x+18} \cdot \frac{7x-21}{5x-10}$