

## Multiplying and Dividing Rational Expressions

Multiply/Divide the following Rational Expressions

1.  $\frac{15x-30}{x} \cdot \frac{x^2}{5x-10}$

2.  $\frac{6x+30}{x} \cdot \frac{x^2}{4x+20}$

3.  $\frac{12x}{x^2+2x+1} \cdot \frac{x^2-1}{4x}$

4.  $\frac{8x}{x^2-2x+1} \cdot \frac{x^2-1}{2x}$

5.  $\frac{16x^2}{x+6} \cdot \frac{3x+18}{2x^3}$

6.  $\frac{20x^3}{x+5} \cdot \frac{3x+15}{4x^2}$

7.  $\frac{3x-15}{4x-20} \cdot \frac{x^2-10x+25}{12x-60}$

8.  $\frac{6x-18}{9x^2+6x-24} \cdot \frac{12x-16}{4x-12}$

9.  $\frac{x^2-x-12}{x^2-2x-15} \cdot \frac{x^2-9x+20}{x^2-8x+16}$

10.  $\frac{x^2+2x-15}{x^2+11x+30} \cdot \frac{x^2+2x-15}{x^2-8x+15}$

11.  $\frac{x^2+3x+2}{x^2+5x+4} \div \frac{x^2+5x+6}{x^2+10x+24}$

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

13.  $\frac{3x^2+11x-4}{24x^3-8x^2} \div \frac{9x+36}{24x^4-36x^3}$

14.  $\frac{2x^2+5x-12}{5x-10} \div \frac{x^2-4x+4}{5x+20}$

15.  $\frac{x^2-x-30}{x^2-36} \div \frac{x^2-25}{x^2+2x-24}$

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

17.  $\frac{3x^2+x-4}{3x^2+7x+4} \div \frac{2x^2+x-3}{2x^2+5x+3}$

18.  $\frac{5x^2+9x-2}{x^2+6x+8} \div \frac{5x^2+14x-3}{x^2+7x+12}$

19.  $\frac{x^3-8}{x^3+1} \div \frac{x^2-4}{x^2-1}$

20.  $\frac{x^3+8}{x^3-1} \div \frac{x^2-4}{x^2-1}$