Dividing Rational Expressions **Name: _____**

Simplify each of the following by performing the indicated operation.

1.) $\frac{2a^2}{5b^2c} \cdot \frac{3bc^2}{8a^2}$

2.) $\frac{y^2}{x+2} \div \frac{y}{x+2}$

3). $\frac{x^{10}y^4}{33x^4} \div \frac{4y^{10}}{39x^5}$

4.) $\frac{3x+6}{7x-7} \div \frac{12x+24}{14x-14}$

5.) $\frac{c^2-3c}{c^2-25} \div \frac{c^2-4c+3}{c^2+4c-5}$

6.) $\frac{x-3}{2x-8} \div \frac{x^2-9}{6x^2-96}$

7.) $\frac{\frac{8x^2-72}{5x+10}}{\frac{4x-12}{5x}}$

8.) $\frac{\frac{x^2-2x-15}{8x+20}}{\frac{2}{4x+10}}$

Simplify each of the following by performing the indicated operation.

9.) $\frac{3x^2-3}{2x^2+8x+6} \div \frac{5x^2-10x+5}{4x+12}$

10.) $\frac{x^2+3x}{x^2+6x+8} \div \frac{4x^3+12x^2}{x^2+x-2}$

11.) $\frac{8ab^2}{2a^2} \div \frac{(a^2+4)(b-3)}{(a-2)(a^2+4)}$

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

13.) $\frac{6x-3}{2x+10} \div \frac{12x^2+6x-6}{4(x-1)^2}$

14.) $\frac{6x+27}{18x^2+36x} \div \frac{16x+72}{2x+4}$

15.) $\frac{\frac{x^2+8x+15}{x^2+2-6}}{\frac{x^2+2x-15}{x^2-2x-3}}$