

Assignment 4.5

Perform the indicated operation, make sure all answers are fully simplified. Show all steps.

1. $\frac{96}{38x} \cdot \frac{25x^2}{45x}$

2. $\frac{7x}{24x^3-64x^2} \cdot \frac{9x-24}{7x}$

3. $\frac{20x^2-100x}{x-1} \cdot \frac{1}{16x^3-80x^2}$

4. $\frac{45x^2}{x-9} \cdot \frac{x^2-5x-36}{3x^3+12x^2}$

5. $\frac{x^2+10x+16}{x^2+6x+8} \div \frac{1}{x+4}$

6. $\frac{4x}{x-6} \div \frac{2x^2}{8x-48}$

$$7. \quad \frac{x^2-2x-15}{8x+20} \div \frac{2}{4x+10}$$

$$8. \quad \frac{x^2+9x+20}{x^2+6x+5} \div \frac{x+5}{x^2-x-2}$$

Refresh Your Memory

For each rational function determine **as many features** as you can without graphing. Be as specific as you can.

$$9. \quad f(x) = \frac{x+3}{x^2+2x-3}$$

$$10. \quad g(x) = \frac{x-2}{x^2+3x-10}$$