

First & Last Name _____ Date _____ Period _____

7.1 Multiplying & Dividing Rationals Practice

Directions: Find each product and simplify. *State excluded values*

1. $\frac{32x^3y}{5xy^2} \cdot \frac{15y}{8x^2y^4}$

$$\frac{12}{y^3} \quad x \neq 0, y \neq 0$$

2. $\frac{m^2-6m+8}{2m-2} \cdot \frac{10}{m-4}$

$$\frac{5(m-2)}{m-1} \quad m \neq 1, 4$$

3. $\frac{p+10}{9-p} \cdot \frac{p^2-5p-36}{4p^2+16p}$

$$-\frac{(p+10)}{4p} \text{ or } -\frac{p+10}{4p} \quad p \neq 9, 0, -4$$

4. $\frac{v^2-49}{20v^3} \cdot \frac{4v^2-24v}{v^2+v-42}$

$$\frac{v-7}{5v^2} \quad v \neq 0, -7, 6$$

Directions: Find each quotient and simplify.

5. $\frac{x^2-3x-28}{6x} \div \frac{2x-14}{2}$

$$\frac{x+4}{6x} \quad x \neq 0, 7$$

$$6. \frac{14m^4}{3m} \div \frac{7m^2}{18m^5}$$

$$12m^6 \\ m \neq 0$$

$$7. \frac{2a^2+14a}{8a^2} \div (10a^2+70a)$$

$$\frac{1}{40a^2} \quad a \neq 0, -7$$

$$8. \frac{1-h^2}{2h^2-10h-12} \div \frac{2h-2}{6}$$

$$\frac{-3}{2(h-6)} \quad h \neq -1, 6, 1$$

$$9. \frac{2r+2}{r+2} \div \frac{4r^2+8r+4}{12r+12}$$

$$\frac{6}{r+2} \quad r \neq -2, -1,$$

$$10. \frac{20x-4}{8x^2} \div (5x-1) \cdot \frac{6x}{5}$$

$$\frac{3}{5x} \quad x \neq 0, \frac{1}{5}$$