

Name: _____

Date: _____

4-2 MULTIPLYING AND DIVIDING RATIONAL EXPRESSIONS HOMEWORK

SKILLS

1. Express each of the following products in simplest form.

(a) $\frac{12x^4}{5y^8} \cdot \frac{15y}{30x^2}$

(b) $\frac{14a^2}{15b^9} \cdot \frac{10b^3}{21a^6}$

(c) $\frac{4x^3}{9z^5} \cdot \frac{3y^7}{10x^2} \cdot \frac{30z^2}{8y^3}$

2. Write each of the following products in simplest form.

(a) $\frac{9x^2 - 16}{12x + 16} \cdot \frac{8x + 8}{3x^2 - x - 4}$

(b) $\frac{x^2 - x - 12}{x^2 + 8x + 15} \cdot \frac{x^2 + 2x - 15}{16 - x^2}$

(c) $\frac{2x^2 + 7x - 4}{8x^3 - 4x^2} \cdot \frac{12x^2 - 24x}{x^2 + 6x + 8}$

(d) $\frac{x^2 - 7x - 8}{1 - x^2} \cdot \frac{3x^2 - 4x + 1}{9x^2 - 1}$



3. When $\frac{24x^{10}}{2y}$ is divided by $\frac{36x^2}{6y^8}$ the result is

(1) $2x^8y^7$

(3) $\frac{x^8}{3y^7}$

(2) $\frac{3x^5}{2y^7}$

(4) $\frac{x^4}{2y^7}$

4. Express the result of each division problem below in simplest form.

(a) $\frac{5x^3 - 10x^2}{10x^2 + 40x} \div \frac{x^2 - 5x + 6}{x^2 + x - 12}$

(b) $\frac{24 - 18x}{9x^2 - 16} \div \frac{2x^2 + 2x}{3x^2 + 7x + 4}$

(c) $\frac{x^2 - 6x + 8}{3x^4 - 6x^3} \div \frac{4x^2 - 1}{2x^3 - x^2}$

(d) $\frac{49 - x^2}{x^2 - 9x + 14} \div \frac{x^2 + 2x - 35}{6 - 3x}$

