

Sec. 11.2 Multiplying and Dividing Rational Expressions

divide: multiply by the reciprocal

$$\frac{a}{b} \div \frac{c}{d} = \frac{a}{b} \cdot \frac{d}{c}$$

Problem 1: what is the product?

a. $\frac{3}{x} \cdot -\frac{2}{x}$

b. $\frac{x}{x+3} \cdot \frac{x-2}{x+5}$

c. $\frac{x+1}{4x-8} \cdot \frac{x-2}{x^2+4x+3}$

$$d. \frac{3x+4}{3x-9} \cdot (x^2+5x-24)$$

Problem 2: What is the quotient?

$$a. \frac{x^2-36}{9x-18} \div \frac{x+6}{x^2+5x-14}$$

$$b. \frac{8x^3-8x}{4x} \div (x^2+5x+4)$$

$$c. \frac{\frac{1}{x+4}}{\frac{x-3}{x^2-16}}$$