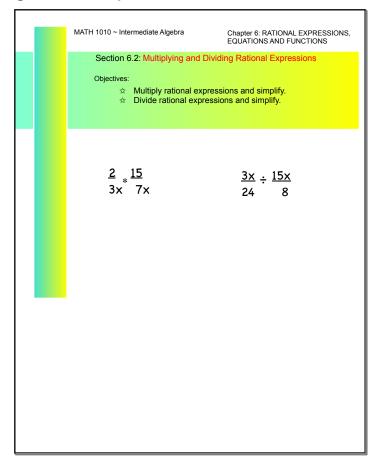
6.2 Multiplying and Dividing Rational Expressions



Multiply these. Simplify the answer.

a)
$$\frac{2x^4y^2}{3xy^3} \cdot \frac{-6xy^2}{14x^3}$$

b)
$$\frac{5x^2 - 5x}{x^2 + 5x - 6} \cdot \frac{x^2 + 8x + 12}{10x}$$

Divide these. Simplify the answer.

a)
$$\frac{x^2-4}{3x^3} \div \frac{2x+2}{9x^4}$$

b)
$$\frac{x^2y^3}{3x^3} \div \frac{x^3y}{2x+x^2}$$

EXAMPLE
Fill in the missing factor.

a)
$$\frac{14x(x-3)^2}{(x-3)(?)} = \frac{2x}{x-3}$$

b)
$$\frac{(3x+5)(?)}{5x^2(3x-5)} = \frac{3x+5}{x}$$

2 EXAMPLE

Simplify the answer to these.

a)
$$\frac{x^2 - 3x + 2}{x + 2} \cdot \frac{3x}{x - 2} \cdot \frac{2x + 4}{x^2 - 5x}$$

b)
$$\frac{7x}{4x-16} \div \frac{14x^2+21x}{2x^2-7x-4}$$

c)
$$\frac{x+3}{x^2+7x+10} \div \frac{x^2+6x+9}{x^2+5x+6}$$

d)
$$\frac{y^2 - 100}{4y^2} \cdot \frac{y^3 - 5y^2 - 50y}{y^4 + 10y^3} \div \frac{(y - 10)^2}{5y}$$

