

Ch 6 Operations with Rational Expressions

1. Find the product

a)
$$\frac{54x^4y^2}{y^4} \cdot \frac{x^3y^2}{9x^5y^3}$$

b)
$$\frac{x^2 - 4x - 5}{x^2 + 6x + 9} \cdot \frac{2x^2 + 6x}{x^2 + 3x + 2}$$

3. Find the difference

a)
$$\frac{7}{x+3} - \frac{4}{x+2}$$

b)
$$\frac{6}{x+4} - \frac{5x}{x-3}$$

5. Solve the equation

a)
$$\frac{4}{3} + \frac{2}{x} = 4$$

b)
$$\frac{5}{x} + \frac{7}{4} = -\frac{9}{x}$$

2. Find the quotient

a)
$$\frac{x^2 - 10x + 21}{x + 2} \div (x^2 - 14x + 49)$$

b)
$$\frac{2xyz}{x^3z^3} \div \frac{6y^4}{2x^2z^2}$$

4. Find the sum

a)
$$\frac{5x+3}{(x+5)(x+4)} + \frac{2}{(x+5)}$$

b)
$$\frac{7}{x^2 - 5x - 24} + \frac{3}{x - 8}$$

6. Simplify the complex fraction

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

b)
$$\frac{15 - \frac{2}{x}}{\frac{x}{5} + 4}$$