

M117 SECTION 7.2 Multiplying and Dividing Rational Expressions

Recall:

$$\frac{14}{15} \cdot \frac{25}{12}$$

$$\frac{3x}{4y} \div \frac{12}{2y^2}$$

1. If a division problem, change to multiply by the reciprocal.
2. If possible, FACTOR each numerator & denominator.
3. Cancel any factor in the numerator with a like factor in the denominator.

$$\frac{4y^6z^3}{5y} \cdot \frac{25}{10y^4z^2}$$

$$\frac{2x}{9-3x} \cdot \frac{5x-15}{20x^3}$$

$$\frac{8x^2-6x^3}{6xy} \div \frac{9x^2-16}{5y^2-10y}$$

$$\frac{x^2+x-6}{9x^3} \cdot \frac{12x^2-6x}{2x^2-5x+2}$$

$$\frac{x^2 + 4x + 4}{x + 1} \div (3x^2 + 5x - 2)$$

$$\frac{x^2 + 2x - xy - 2y}{x^2 - y^2} \div \frac{2x + 4}{x + y}$$

$$\frac{4x^2 - 11xy - 3y^2}{y^2 + 4xy - 5x^2} \cdot \frac{y^2 + 2xy - 3x^2}{8x^2 + 6xy + y^2} \div \frac{3x^2 - 8xy - 3y^2}{10x^2 + 3xy - y^2}$$