

11.4 Multiplying Rational Expressions

For polynomials a, b, c
for $b \neq 0, d \neq 0$

$$\frac{a}{b} \cdot \frac{c}{d} = \frac{ac}{bd}$$

EX: Multiply expressions involving monomials

$$\frac{7x^2y}{12z^3} \cdot \frac{14z}{49xy^4}$$

Multiply: $\frac{3x}{16x^2} \cdot \frac{8x^2}{3}$

Ex: Multiply: $\frac{b+3}{4b-12} \cdot \frac{b^2-4b+3}{b^2-4b-30}$

- 1) Factor the expressions, if possible
- 2) Simplify

EX: