

Simplify

$$\frac{x^2 - 4}{x^2 - 3x - 10}$$

$$\frac{(x+2)(x-2)}{(x-5)(x+2)}$$

$$\frac{x-2}{x-5} \cdot \frac{\cancel{x+2}}{\cancel{x+2}}$$

$$\frac{x-2}{x-5}$$

Multiply

$$\frac{5}{8} \cdot \frac{6}{35} = \frac{30}{280}$$

$$\frac{3}{28}$$

OR

$$\frac{\cancel{5}^1}{8} \cdot \frac{\cancel{6}^3}{\cancel{35}^7}$$

$$\frac{3}{28}$$

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

$$\frac{\cancel{(x+4)}}{\cancel{(x-2)}} \cdot \frac{\cancel{(x-2)}^1}{\cancel{(x+4)}(x-1)}$$

$$\boxed{\frac{1}{x-1}}$$

$$\frac{x^2 - 2x}{x^2 - 5x + 6} \cdot \frac{x^2 - 9}{x^2 + 7x + 12} \quad \underline{\underline{\text{Section 3.2}}}$$

$$\frac{x \cancel{(x-2)}}{\cancel{(x-3)} \cancel{(x-2)}} \cdot \frac{\cancel{(x+3)} \cancel{(x-3)}}{(x+4) \cancel{(x+3)}}$$

$$\frac{x}{x+4}$$

Metacognition

$$\sqrt{16} = 4$$

$$(-4)^2 = 16$$

$$\sqrt{36} = 6$$

$$\sqrt{1} = 1$$

$$\sqrt{81} = 9$$

$$\sqrt{0} = 0$$

$\sqrt{-4}$ doesn't exist

$$\sqrt[3]{8} = 2 \quad \text{because } 2^3 = 2 \cdot 2 \cdot 2 = 8$$

$$\sqrt[3]{-8} = -2 \quad \text{" } (-2)(-2)(-2) = -8$$

$$\sqrt{\frac{9}{4}} = \frac{3}{2} \quad \frac{3}{2} \cdot \frac{3}{2} = \frac{9}{4}$$

Simplify

$$\sqrt{12}$$

$$\sqrt{4 \cdot 3}$$

$$\sqrt{4} \sqrt{3}$$

$$2\sqrt{3}$$

$$\sqrt{ab} = \sqrt{a} \sqrt{b}$$

$$\sqrt{6 \cdot 2}$$