

Limits: Evaluating Limits Using Limit Laws

Evaluate the following limit:

$$\lim_{x \rightarrow 4} \frac{x^2 - 4x}{x^2 - 3x - 4} = \lim_{x \rightarrow 4} \frac{x \cancel{(x-4)}}{\cancel{(x-4)}(x+1)}$$

$$= \lim_{x \rightarrow 4} \frac{x}{x+1}$$

$$= \lim_{x \rightarrow 4} x$$

$$\frac{\lim_{x \rightarrow 4} x}{\lim_{x \rightarrow 4} x+1}$$

$$= \frac{4}{4+1}$$

$$= \frac{4}{5}$$

