

1

Evaluate the limit, if it exists

$$\lim_{x \rightarrow 4} \frac{x^2 - 4x}{x^2 - 3x - 4}$$

2

Let

$$h(x) \begin{cases} x & \text{if } x < 0 \\ x^2 & \text{if } 0 < x \leq 2 \\ 8 - x & \text{if } x > 2 \end{cases}$$

a) evaluate each of the limits, if it exists

1.
$$\lim_{x \rightarrow 0^+} h(x)$$

3.
$$\lim_{x \rightarrow 1} h(x)$$

2.
$$\lim_{x \rightarrow 0} h(x)$$

4.
$$\lim_{x \rightarrow 2^-} h(x)$$

5.
$$\lim_{x \rightarrow 2^+} h(x)$$

6.
$$\lim_{x \rightarrow 2} h(x)$$