

Topic 2: Infinite limits

Determine the following limits (answer as appropriate, with a number, ∞ , $-\infty$ or does not exist).

$$1. \lim_{x \rightarrow 1^-} \frac{1-2x}{x^2-1}$$

$$2. \lim_{x \rightarrow 1} \frac{1-2x}{x^2-1}$$

$$3. \lim_{x \rightarrow 1^+} \frac{1-2x}{x^2-1}$$

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

$$5. \lim_{x \rightarrow 2^-} \frac{-x}{\sqrt{4-x^2}}$$

$$6. \lim_{x \rightarrow -1^-} (x^2 - 2x - 3)^{-2/3}$$

Answers

1) ∞

2) *DNE*

3) $-\infty$

4) ∞

5) $-\infty$

6) ∞