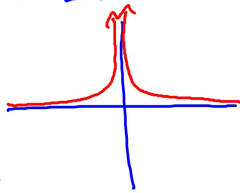


Tuesday - August 25, 2015

1.5 Infinite Limits

$$f(x) = \frac{1}{x^2}$$



$$\lim_{x \rightarrow 0} f(x) = \text{DNE} \quad (\text{unbounded})$$

$$\lim_{x \rightarrow 0} f(x) = \infty$$

$$h(x) = \frac{1}{x}$$

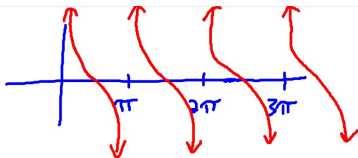


$$\lim_{x \rightarrow 0} h(x) = \text{DNE} \quad (\text{NOT } \infty \text{ or } -\infty)$$

$$\lim_{x \rightarrow 0^-} h(x) = -\infty$$

$$\lim_{x \rightarrow 0^+} h(x) = \infty$$

$$g(x) = \cot(x)$$



$$\lim_{x \rightarrow 3\pi^-} g(x) = -\infty$$

$$\lim_{x \rightarrow 3\pi^+} g(x) = \infty$$

$$\lim_{x \rightarrow 3\pi} g(x) = \text{DNE}$$

$$w(x) = \frac{x+2}{x^2+3x+2} = \frac{(x+2)}{(x+1)(x+2)} = \frac{1}{(x+1)}$$

$$\lim_{x \rightarrow -2} w(x) = -1 \quad w(-2) = \frac{\text{undefined}}{0} = \frac{0}{0}$$

$$\lim_{x \rightarrow -1} w(x) = \text{DNE}$$

1.5 HS

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1-5, 7-15 odd,
23, 25, 29-43 odd,
49, 51, 60, 61, 63