

9.11 Limits Summary Assignment 1

Name _____

Find the following limits:

$$f(x) = x^3 - 2x + 7$$

$$\lim_{x \rightarrow 5} f(x)$$

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

$$\lim_{x \rightarrow -\infty} f(x)$$

$$g(x) = \frac{x - 4}{x^2 - 3x - 4}$$

$$\lim_{x \rightarrow 0} g(x)$$

$$\lim_{x \rightarrow 4} g(x)$$

$$\lim_{x \rightarrow \infty} g(x)$$

$$\lim_{x \rightarrow -\infty} g(x)$$

$$\lim_{x \rightarrow -1^+} g(x)$$

$$\lim_{x \rightarrow -1^-} g(x)$$

$$h(x) = \frac{x^2 + 10x + 25}{x^2 - 2x + 1}$$

$$\lim_{x \rightarrow \infty} h(x)$$

$$\lim_{x \rightarrow -5} h(x)$$

$$\lim_{x \rightarrow 10} h(x)$$

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

$$\lim_{x \rightarrow 1^-} h(x)$$

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

$$p(x) = \frac{x^2 + 3x - 70}{x - 4}$$

$$\lim_{x \rightarrow 0} p(x)$$

$$\lim_{x \rightarrow \infty} p(x)$$

$$\lim_{x \rightarrow 4^+} p(x)$$

$$\lim_{x \rightarrow -\infty} p(x)$$

$$\lim_{x \rightarrow 4^-} p(x)$$

$$r(x) = \frac{-x^2 + 4x - 4}{x^2 + 7x - 18}$$

$$\lim_{x \rightarrow 0} r(x)$$

$$\lim_{x \rightarrow \infty} r(x)$$

$$\lim_{x \rightarrow 2^-} r(x)$$

$$\lim_{x \rightarrow 2^+} r(x)$$

$$\lim_{x \rightarrow -9} r(x)$$

$$\lim_{x \rightarrow -\infty} r(x)$$

$$t(x) = \frac{x + 4}{x^3 + 4x^2 - 9x - 36}$$

$$\lim_{x \rightarrow -2} t(x)$$

$$\lim_{x \rightarrow 0} t(x)$$

$$\lim_{x \rightarrow -4} t(x)$$

$$\lim_{x \rightarrow 3} t(x)$$

$$\lim_{x \rightarrow -3} t(x)$$

$$\lim_{x \rightarrow \infty} t(x)$$

$$w(x) = \frac{x - 5}{(x + 3)^2(x - 1)}$$

$$\lim_{x \rightarrow \infty} w(x)$$

$$\lim_{x \rightarrow -3} w(x)$$

$$\lim_{x \rightarrow 1} w(x)$$

$$\lim_{x \rightarrow 4} w(x)$$

$$\lim_{x \rightarrow 0} w(x)$$

$$\lim_{x \rightarrow -\infty} w(x)$$

$$u(x) = \frac{x^2 + 2x + 1}{x^4 - 8x^2 + 16}$$

$$\lim_{x \rightarrow 0} u(x)$$

$$\lim_{x \rightarrow \infty} u(x)$$

$$\lim_{x \rightarrow -2} u(x)$$

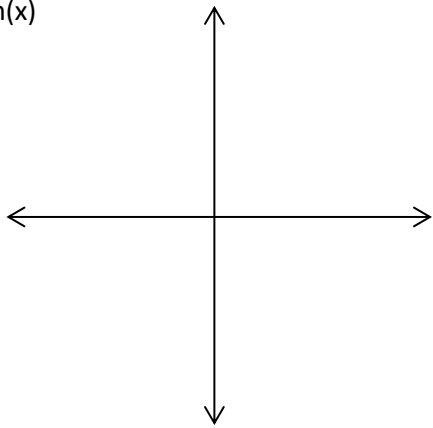
$$\lim_{x \rightarrow 3} u(x)$$

$$\lim_{x \rightarrow 2} u(x)$$

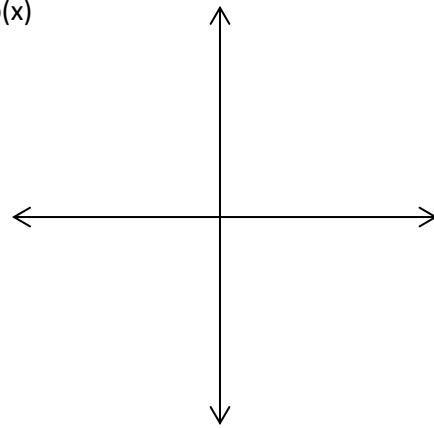
$$\lim_{x \rightarrow -5} u(x)$$

Graph the specified functions:

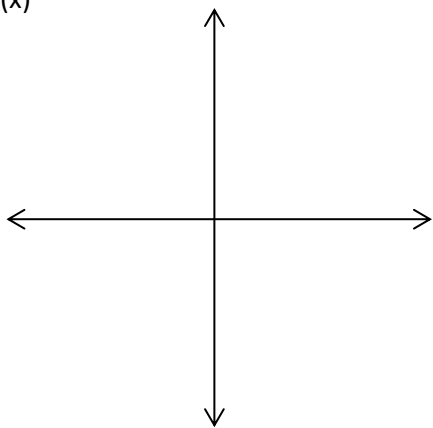
h(x)



p(x)



t(x)



w(x)

