

Additional homework section 1.2:

Plot the following functions using your calculator or computer, create tables, and investigate the behavior of each function for x-values close to the given a-value.

$$f(x) := \frac{x^2 - .5x + .06}{x - .3} \quad a := .3$$

$$\underset{\sim}{f}(x) := \frac{x^2 - .5x + .07}{x - .3} \quad \underset{\sim}{a} := .3$$

$$\underset{\sim}{f}(x) := x \cdot \sin\left(\frac{1}{x}\right) \quad \underset{\sim}{a} := 0$$

$$\underset{\sim}{f}(x) := \sin\left(\frac{1}{x}\right) \quad \underset{\sim}{a} := 0$$

$$\underset{\sim}{f}(x) := x \cdot \sin\left(\frac{\pi}{x}\right) + \frac{x}{|x|} \quad \underset{\sim}{a} := 0$$

$$\underset{\sim}{f}(x) := \sin\left(\exp\left(\frac{1}{x}\right)\right) \quad \underset{\sim}{a} := 0$$