

## QUIZ 1

Name \_\_\_\_\_

You may assume that you know that  $\lim_{x \rightarrow 0} \frac{\sin(x)}{x} = 1$

1. Build a table of values to estimate the slope of the function  $f(x) = e^x$  at  $a = 0$ .

2. Consider  $\lim_{x \rightarrow 0} \frac{\tan(x)}{x}$ .

Use either a sketch of a graph or a table of values to decide whether this limit exists and if it does conjecture the value.

3. Calculate  $\lim_{x \rightarrow 0} \frac{xe^{-2x+1}}{x^2 + x}$