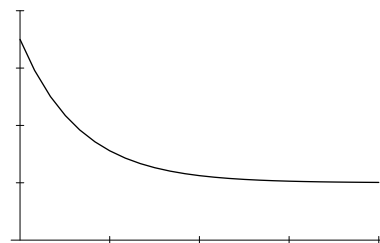


1. (2 points) What is a good estimate for $\lim_{x \rightarrow 0} \frac{2^x - 1}{x}$? Give your answer to at least three decimal places, and explain in a sentence how you know it is that accurate.

2. (3 points) What is the limit definition for the derivative of a function $f(x)$ at the point $x = a$? Illustrate the parts of the definition on the figure shown below, to the right.



3. (3 points) If the graph to the left below shows $f(x)$, sketch in the axes to the right $f'(x)$.

