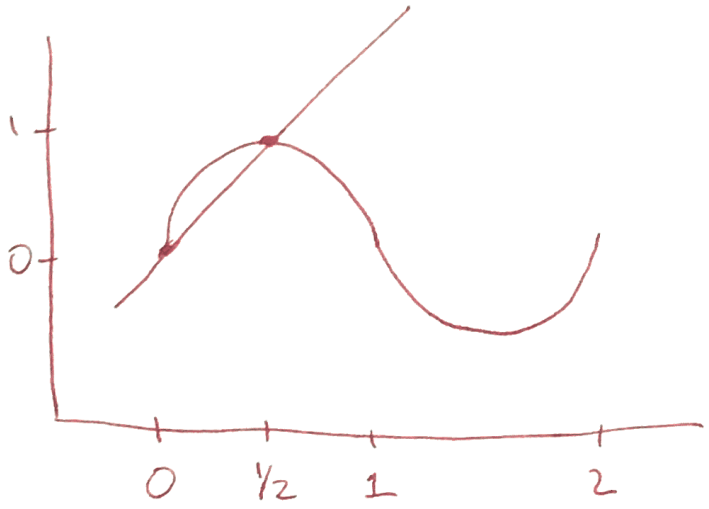
quiz 5
math111707
u new haven
18 Sep

name: Solution

1 (10 points). Consider the position function $s(t) = \sin(\pi t)$ representing the position of an object moving along the line at the end of a spring. Sketch a graph of s together with the secant line that passes through $(0, s(0))$ and $(0.5, s(0.5))$. Determine the slope of this secant line.



the slope of the secant line is

$$\frac{\sin\left(\frac{1}{2}\pi\right) - \sin(0\cdot\pi)}{\frac{1}{2} - 0} = \frac{1 - 0}{\frac{1}{2} - 0}$$

$$= 2.$$