

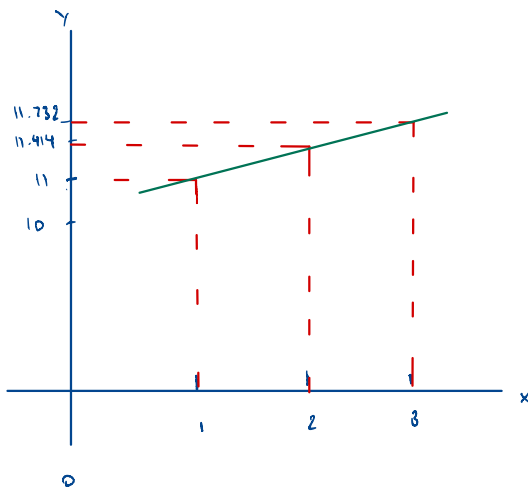
HW#2 Due Jan 20, 2022

HW Given $y = 10 + \sqrt{x}$,

- a) Find the derivative $f'(x)$. $= \frac{1}{2\sqrt{x}}$
 b) Fill in the table

Point	X	Y	$f'(x)$: slope
	0	10	
A	1	11	0.1667
B	2	11.414	0.148
C	3	11.732	0.146

- c) Does the slope increase as x increases? No, the slope decrease
 d) Approximate the change in Y when $\Delta x = 0.2$ at $x_1 = 3$. Is the approximation under- or over-estimate? it will underestimate



$$(0.2)(3)(0.146) = 0.2484$$