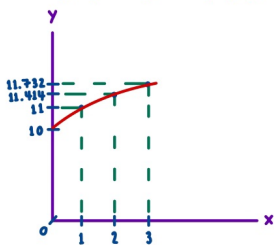


HW Find the 2nd-order derivative of $y = f(x) = 10 + \sqrt{x}$ and fill in the table:

Point	x	y	$f'(x)$	$f''(x)$
	0	10		
A	1	11	$\frac{1}{2}$	$-\frac{1}{4}$
B	2	11.414	$\frac{\sqrt{2}}{4}$	$-\frac{\sqrt{2}}{16}$
C	3	11.732	$\frac{\sqrt{3}}{6}$	$-\frac{\sqrt{3}}{36}$

$$\frac{1}{2\sqrt{x}} \rightarrow \frac{1x^{-\frac{1}{2}}}{2} \rightarrow -\frac{1}{2} \cdot \frac{1}{2} x^{-\frac{1}{2}-\frac{1}{2}} \rightarrow -\frac{1x^{-\frac{3}{2}}}{4} \rightarrow -\frac{1}{4\sqrt{x^3}} \rightarrow -\frac{1}{4 \cdot x \cdot \sqrt{x}}$$

Plot the graph of y and $f'(x)$. Is $f'(x)$ linear?



Ans $f'(x)$ is not linear

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