**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 | 0 | 0 |
| A | 1 | 11 | 0.5 | -0.25 |
| B | 2 | 11.414 | 0.3536 | -0.0884 |
| C | 3 | 11.732 | 0.2887 | 0.04811 |

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

$$f'(x) = \frac{1}{2} x^{-\frac{1}{2}} = \frac{1}{2\sqrt{x}}$$

$$f''(x) = -\frac{1}{4} x^{-\frac{3}{2}} = -\frac{1}{4\sqrt{x^3}}$$