

5.1-What Does f' say about f ?

Read Section 5.1 in the text and complete the following on your own :

If $f'(x) > 0$ for all $x \in (a, b)$, then f is

If $f'(x) < 0$ for all $x \in (a, b)$, then f is

If $f''(x) > 0$ for all $x \in (a, b)$, then f is

If $f''(x) < 0$ for all $x \in (a, b)$, then f is

Example:

Sketch the graph of a function whose slope is always negative and increasing.

Sketch the graph of a function which satisfies the following:

$$f(2) = 1$$

$$f'(x) < 0 \text{ for } x < 2$$

$$f'(x) > 0 \text{ for } x > 2$$

$$f''(x) < 0 \text{ for all } x$$

On Your Own: 5.1 #1,3,12,13,15,17,21,22