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:

$f(2) = 1$
$f''(x) < 0$ for $x < 2$
$f'(x) > 0$ for $x > 2$
$f''(x) < 0$ for all $x$

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