

QUIZ # 4

Name:

1. Fill in the blanks.

(a) If f'' is positive on an interval, then f' is _____ on that interval and f is _____ on that interval.

(b) If f'' is negative on an interval, then f' is _____ on that interval, and f is _____ on that interval

2. Sketch the graph of a continuous function f with the following properties

- $f'(x) > 0$, for all x
- $f''(x) < 0$ for $x < 2$ and $f''(x) > 0$ for $x > 2$.

3. Estimate the following limits by substituting in smaller and smaller values of h . (At least 3 values of h .)

(a) $\lim_{h \rightarrow 0} \frac{7^h - 1}{h}$

(b) $\lim_{h \rightarrow 0} \frac{\cosh h - 1}{h}$