A. Fill in the blanks in the statements below (so that the resulting statement is true). Assume the functions are continuous and differentiable.

(a) If $f'$ is positive on an interval, then $f$ is **increasing** on the interval.
(b) If $f$ is concave up on an interval, then $f''$ is **positive** on the interval.
(c) If $f$ is decreasing on an interval, then $f'$ is **negative** on the interval.
(d) If $f$ has a local maximum at $x = 1$, then $f'(1) = 0$.
(e) If $f$ has an inflection point at $x = 3$, then $f'' = 0$.
(f) If $f'$ is decreasing on an interval, then $f$ is **concave downward** on the interval.
(g) If $f'$ has a local maximum at $x = 5$, then $f$ has an **inflection point** at $x = 5$.
(h) If $f'(4) = 0$ and $f''(4) > 0$, then $f$ has a **local minimum** at $x = 4$. 