Formulas and Theorems

Let f be differentiable for $a < x < b$ and continuous for a $a \le x \le b$,

1.   If $f'(x) > 0$ for every x in (a,b), then f is increasing on $[a,b]$.
2.   If $f'(x) < 0$ for every x in (a,b), then f is decreasing on $[a,b]$.