

Assume f and g are continuous at $x=a$, and $f(a) = g(a)$ - *same starting point*. Then:

- If f and g are differentiable for $x > a$, and $f'(x) \leq g'(x)$, then $f(x) \leq g(x)$ for $x > a$ because $g(x)$ more or less has a higher slope
- If f and g are differentiable for $x < a$, and $f'(x) \leq g'(x)$, then $f(x) \geq g(x)$ for $x < a$