

DATE: \_\_\_\_\_

### Curve Sketching

Suppose that you have the following information about a point  $(a, f(a))$  on the graph of a continuous function  $f(x)$ . What do you know about the point  $(a, f(a))$ ?

**a)**  $f'(a) = 0$

**b)**  $f'(a) = 0$ , and  $f'(x) < 0$  on  $(b, a)$ , and  $f'(x) > 0$  on  $(a, c)$ , where  $b < a < c$ .

**c)**  $f'(a) = 0$  and  $f''(a) > 0$

**d)**  $f''(a) = 0$

**e)**  $f''(a) = 0$ , and  $f''(x) < 0$  on  $(b, a)$ , and  $f''(x) < 0$  on  $(a, c)$ , where  $b < a < c$ .