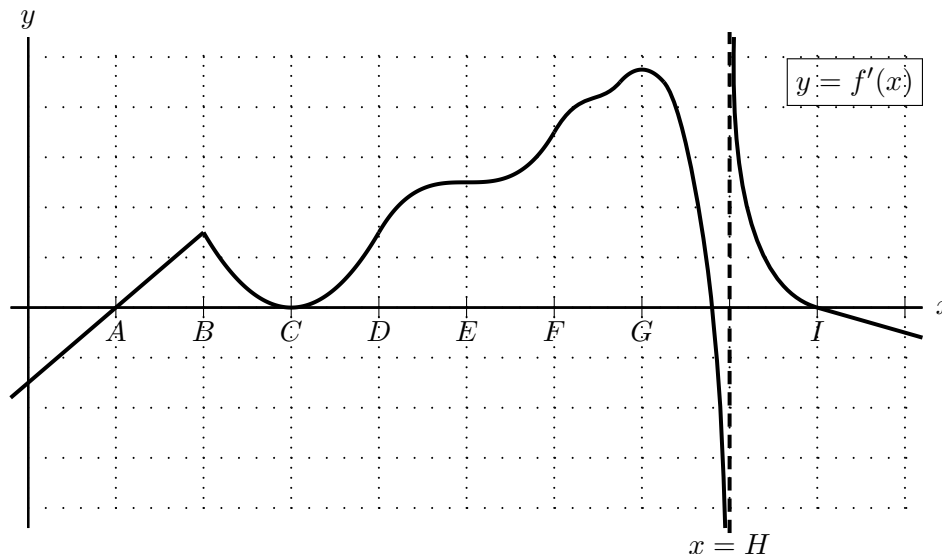


3. [12 points] The graph of a portion of  $y = f'(x)$ , the derivative of  $f(x)$  is shown below. Note that there is a sharp corner at  $x = B$  and that  $x = H$  is a vertical asymptote. The function  $f(x)$  is continuous with domain  $(-\infty, \infty)$ .



For each of the questions below, circle all of the available correct answers. (Circle NONE if none of the available choices are correct.)

- a. [2 points] At which of the following six values of  $x$  is the function  $f(x)$  not differentiable?

B            C            E            F            H            I            NONE

- b. [2 points] At which of the following six values of  $x$  does the function  $f'(x)$  appear to be not differentiable?

A            B            C            D            E            F            NONE

- c. [2 points] At which of the following nine values of  $x$  does  $f(x)$  have a critical point?

A    B    C    D    E    F    G    H    I    NONE

- d. [2 points] At which of the following nine values of  $x$  does  $f(x)$  have a local minimum?

A    B    C    D    E    F    G    H    I    NONE

- e. [2 points] At which of the following nine values of  $x$  is  $f''(x) = 0$ ?

A    B    C    D    E    F    G    H    I    NONE

- f. [2 points] At which of the following nine values of  $x$  does  $f(x)$  have an inflection point?

A    B    C    D    E    F    G    H    I    NONE