10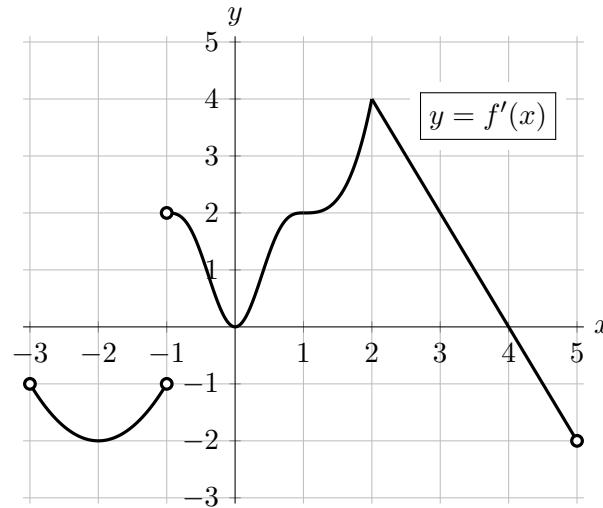. [12 points] Let $f(x)$ be a continuous function defined on $-3 < x < 5$. The graph of $f'(x)$ (the derivative of $f(x)$) is shown below. Note that $f'(x)$ has a sharp corner at $x = 2$.

For each of the following parts, circle all of the available correct answers.

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

> *Solution:*
> $x = -2$ | x=-1 | | x=0 | $x = 1$ $x = 2$ | x=4 | NONE OF THESE

b. [2 points] At which of the following values of x does $f(x)$ attain a global maximum on the interval $[0, 3]$?

> *Solution:*
> $x = 0$ $x = 1$ $x = 2$ | x=3 | NONE OF THESE

c. [2 points] At which of the following values of x does $f(x)$ attain a local minimum?

> *Solution:*
> $x = -2$ | x=-1 | $x = 0$ $x = 1$ $x = 4$ NONE OF THESE

d. [2 points] Which of the following values of x are not in the domain of $f''(x)$?

> *Solution:*
> | x=-1 | $x = 0$ $x = 1$ | x=2 | NONE OF THESE

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

> *Solution:*
> | x=-2 | | x=-1 | | x=0 | $x = 1$ $x = 4$ NONE OF THESE

f. [2 points] On which of the following intervals is $f''(x)$ increasing over the entire interval?

> *Solution:*
> | (-3,-1) | $(-1, 0)$ $(-1, 1)$ $(0, 2)$ NONE OF THESE