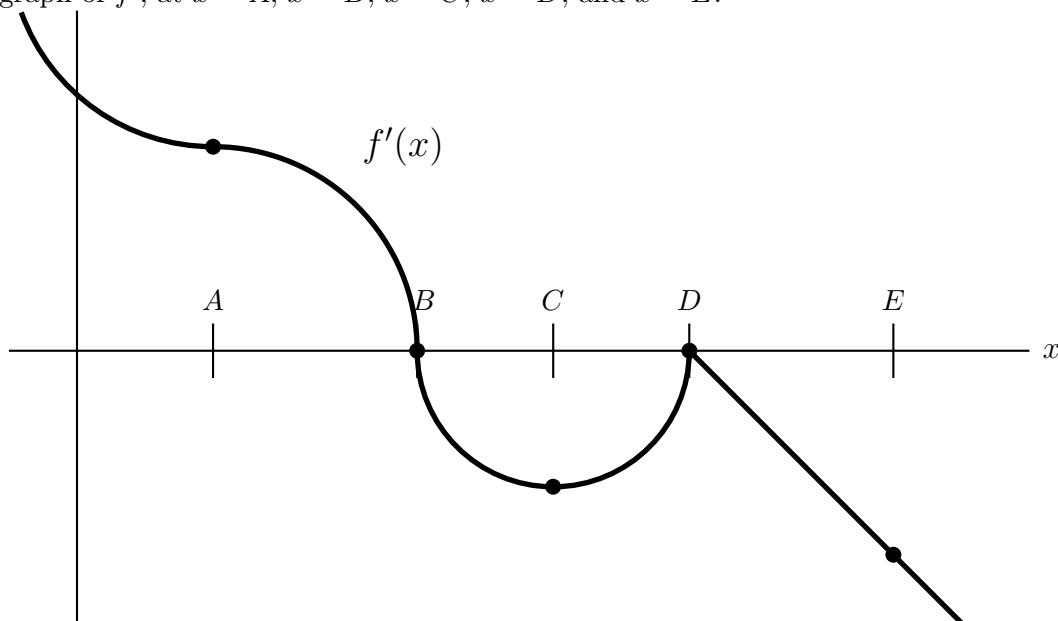


6. [12 points] The *derivative* of a function  $f$  is graphed below. Five points are marked on the graph of  $f'$ , at  $x = A$ ,  $x = B$ ,  $x = C$ ,  $x = D$ , and  $x = E$ .



For each of the following, circle ALL answers which are correct. Each part has at least one correct answer. Pay careful attention to whether each question is asking about  $f$ ,  $f'$ , or  $f''$ .

- a. [2 points] The function  $f'$  has a local minimum when \_\_\_\_\_.

$x = A$                    $x = B$                    $x = C$                    $x = D$                    $x = E$

- b. [2 points] The function  $f$  is increasing when \_\_\_\_\_.

$x = A$                    $x = B$                    $x = C$                    $x = D$                    $x = E$

- c. [2 points] The function  $f$  has a critical point when \_\_\_\_\_.

$x = A$                    $x = B$                    $x = C$                    $x = D$                    $x = E$

- d. [2 points] The global maximum of  $f$  on the interval  $A \leq x \leq E$  occurs when \_\_\_\_\_.

$x = A$                    $x = B$                    $x = C$                    $x = D$                    $x = E$

- e. [2 points] The function  $f$  has an inflection point when \_\_\_\_\_.

$x = A$                    $x = B$                    $x = C$                    $x = D$                    $x = E$

- f. [2 points] The function  $f''$  is undefined when \_\_\_\_\_.

$x = A$                    $x = B$                    $x = C$                    $x = D$                    $x = E$