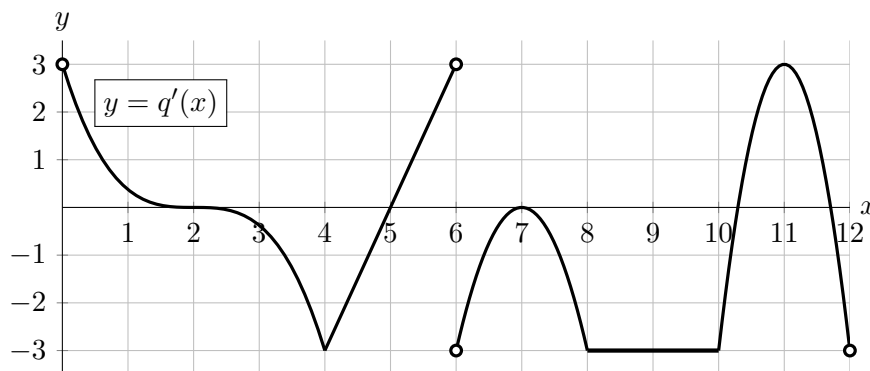**1.** [12 points]  The function $q(x)$ is continuous on $[0, 12]$.  The graph of $q'(x)$ (the derivative of $q$) is given below.



**a.** [2 points] On which of the following interval(s) is $q(x)$ decreasing? Circle all correct choices.

(0,2)                          (6,7)                          (7,8)                          NONE OF THESE

**b.** [2 points] On which of the following interval(s) is $q(x)$ concave down? Circle all correct choices.

(0,2)                          (2,4)                          (6,7)                          NONE OF THESE

**c.** [2 points] Which of the following are critical point(s) of $q'(x)$? Circle all correct choices.

$x = 2$                          $x = 5$                          $x = 9$                          NONE OF THESE

**d.** [2 points] Which of the following are critical point(s) of $q(x)$? Circle all correct choices.

$x = 5$                          $x = 6$                          $x = 11$                          NONE OF THESE

**e.** [2 points] At which of the following value(s) of $x$ does $q(x)$ have a local maximum? Circle all correct choices.

$x = 6$                          $x = 7$                          $x = 11$                          NONE OF THESE

**f.** [2 points] At which of the following value(s) of $x$ does $q(x)$ have an inflection point? Circle all correct choices.

$x = 2$                          $x = 4$                          $x = 7$                          NONE OF THESE