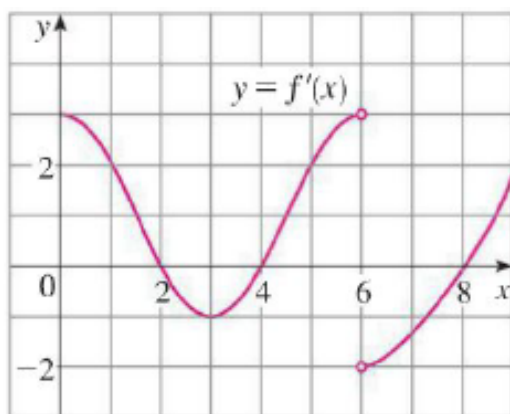


### Quiz 16 Key — MA161 — October 31, 2018

Alden Bradford

Min	Mean	Max
11	18	20

1. (12 points) The graph of the **first derivative** of a function  $f(x)$  is shown. Which of the statements below is/are correct? Answer true or false for each.



- (a)  $f(x)$  is concave downward on  $(5, 6)$   
(b)  $f(x)$  is decreasing on  $(2, 4)$   
(c)  $f(x)$  has a local maximum at  $x = 2$

(a) False, (b) True, (c) True.

Note: from the third midterm in the spring of 2017.

2. Let  $y = \frac{1}{12}x^4 - \frac{1}{3}x^3 + \frac{1}{2}x^2$ .

- (a) (2 points) Find  $y''$ .  
(b) (6 points) How many inflection points does the graph of  $y$  have? Be careful!

(a)  $y'' = x^2 - 2x + 1$ , (b) 0

Note: from the third midterm in the fall of 2017.