

This quiz is worth 10 points and you have 10 minutes to complete it.

**Calculators ARE allowed today.**

**1.** (10 pts) The graph below shows the graph of a function  $f(x)$  together with a tangent line and a secant line for  $f(x)$ . The slope of the tangent line is approximated by the slope of the secant line (although not very accurately, in this example). In other words we have:

$$f'(c) \approx \frac{f(c+h) - f(c)}{h}.$$

Label each of the quantities listed below on the graph. Note: some of these values are locations, some are slopes, and some are distances; be sure to make clear which are which. You may have to draw lines or indicate distances or coordinates on the graph.

**Make sure each quantity is indicated and labeled clearly, and make sure it is clear whether your labels refer to slopes, coordinates, or distances.**

- A.  $c$
- B.  $h$
- C.  $c+h$
- D.  $f(c)$
- E.  $f(c+h)$
- F.  $f(c+h) - f(c)$
- G.  $\frac{f(c+h) - f(c)}{h}$
- H.  $f'(c)$

