

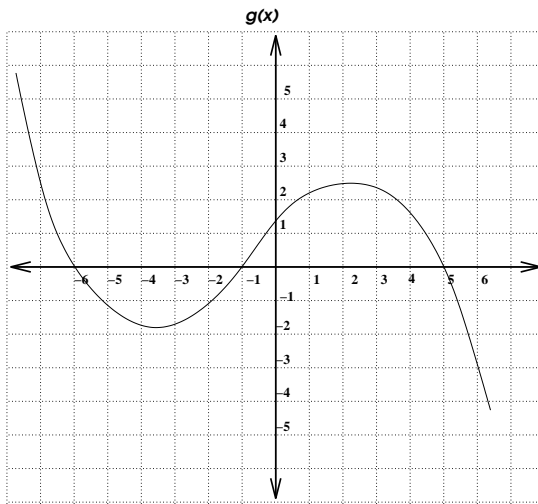
Week in Review # 4

Section 2.1

Things to know:

- Know how to compute derivatives at a point from a graph or chart.
 - Know the concept of the derivative at a point.
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1. Use the graph of $g(x)$ to answer these questions.



(a) Where is $g(x)$ positive?

(b) Where is $g(x)$ negative?

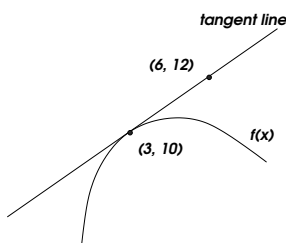
(c) Estimate $g'(3)$.

(d) Estimate $g'(2)$.

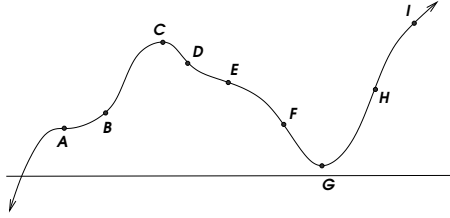
(e) Estimate $g'(-3)$.

2. Use the graph of $f(x)$ to fill in these blanks.

$$f(\underline{\hspace{2cm}}) = \underline{\hspace{2cm}} \qquad f'(\underline{\hspace{2cm}}) = \underline{\hspace{2cm}}$$



3. Use the points on the graph to answer these questions.



- At which points is the derivative zero?
- At which points is the derivative positive?
- At which points is the derivative negative?
- At which point is the derivative the largest?
- At which point is the derivative the least?

4. Use the table to estimate the derivatives.

x	1	1.5	2	2.5	3	4	7	12	14
f(x)	1	3	6	8	12	14	25	32	42

(a) $f'(2) =$

(b) $f'(1) =$

(c) $f'(7) =$

(d) $f'(13) =$

5. Estimate the derivative for $f(x) = x^x$ at $x = 2$ and at $x = 5$