

Name:

Section 2.2 & 2.3 - In class examples

Math 151 – Spring 2018

Section 2.2

1. Find approximate values for $f'(5)$ and $f'(15)$.

x	0	5	10	15	20
$f(x)$	100	70	55	46	40

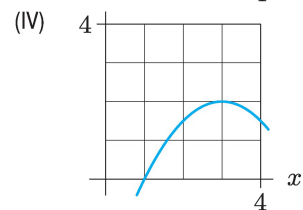
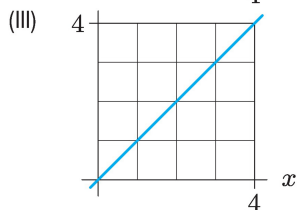
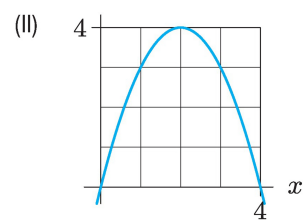
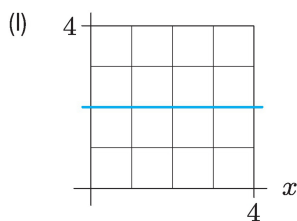
2. Match each property (a) – (d) with one or more of graphs (I)–(IV) of functions.

(a) $f'(x) = 1$ for all $0 \leq x \leq 4$.

(b) $f'(x) > 0$ for all $0 \leq x \leq 4$.

(c) $f'(2) = 1$

(d) $f'(1) = 2$



Section 2.3

1. The cost, $C = f(w)$, in dollars of buying a chemical is a function of the weight bought, w , in pounds.

(a) In the statement $f(12) = 5$, what are the units of the 12? What are the units of the 5? Explain what this is saying about the cost of buying the chemical.

(b) Do you expect the derivative f' to be positive or negative? Why?

(c) In the statement $f'(12) = 0.4$, what are the units of the 12? What are the units of the 0.4? Explain what this is saying about the cost of buying the chemical.

2. Suppose that $f(t)$ is a function with $f(25) = 3.6$ and $f'(25) = -0.2$.

(a) Estimate $f(26)$.

(b) Estimate the relative rate of change at $t = 25$.