

Name: SOLUTIONS

Section 1.3 - In class example

Math 151 - Spring 2018

1. The table below gives the revenues, R of General Motors

Year	2003	2004	2005	2006	2007	2008
R	184.0	192.9	193.1	205.6	181.1	149.0

- (a) Find the average rate of change in revenues between 2003 and 2008. Give units and interpret your answer.

$$\begin{aligned} \text{Average rate of change} &= \frac{\text{Change in Revenue}}{\text{Change in time}} = \frac{149.0 - 184.0}{2008 - 2003} \\ &= -7 \text{ billion dollars/year.} \end{aligned}$$

- (b) From 2003 to 2008, were there any one-year intervals during which the average rate of change was negative? If so which?

There are two one-year intervals during which the average rate of change of revenues was negative - 24.5 billion/year between 2006 & 2007 and -32.1 billion per year between 07 and 08.

2. On Black Monday, October 28, 1929, the stock market on Wall Street crashed. The Dow Jones average dropped from 298.94 to 260.64 in one day. What was the relative change in the index?

$$\text{Relative change} = \frac{260.64 - 298.94}{298.94} = -12.89\%$$