Math 1110: Practice Problems for 2.1

Problem 1  The National Oceanic and Atmospheric Administration collects climate data at weather stations around the US. The chart below shows the total rainfall (beginning June 1) observed in Binghamton, NY station during the month of June, 2006. The dots indicate the measurement at the end of the corresponding day.

(a) What was the total rainfall in Binghamton in June, 2006?

(b) Estimate the average rainfall from June 1 through 4, 2006.

(c) On which day was the rain falling the heaviest? How can you tell?

(d) The graph of these data exhibits increasing behavior. Would we ever see a decrease for this function? Why or why not?
Problem 2  The graph of $f(t)$ given below gives the position of a particle at time $t$.

List the following quantities in order, from smallest to largest. (No justification is required.)

A, the average velocity between $t = 0$ and $t = 2$
B, the average velocity between $t = 3$ and $t = 6$
C, the instantaneous velocity at $t = 3$
D, the instantaneous velocity at $t = 4$
E, the instantaneous velocity at $t = 6$

Answer: __________________________  __________________________  __________________________  __________________________  largest

Problem 3  2.1: 6

Problem 4  2.1: 14