

Math 162**Quiz 5**

Form A

Show all work in a neat and organized fashion. Clearly indicate your answers.
10 points possible.

Use correct units!!

1. (3 pts.) Of a group of 200 college men surveyed, the number who were taller than a given number of inches is recorded in the table below.

Inches	Number of Men
65	198
66	195
67	184
68	167
69	139
70	101
71	71
72	43
73	26
74	11
75	4
76	2

Find the average rate of change in the number of men when the height rose from 69 inches to 73 inches? (Use correct units!)

2. (3 pts.) The total number of states associated with the national PTA organization is given by the model

$$S(x) = \frac{49}{1 + 36e^{-0.21x}}$$

where $S(x)$ is the number of states, and x is the number of years since 1895. How rapidly, on average, did the number of states change from 1910 through 1915? (Use correct units!)

3. (2 pts.) In your own words, briefly describe the difference between average rate of change and instantaneous rate of change.

4. (2 pts.) For the graph below, determine whether the instantaneous rate of change is positive, negative, or zero, at each of these points: $x = 1$, $x = 2$, $x = 4$.