

Math 231 B,C. Fall 2009. Homework from lecture on 8/28.

INSTRUCTIONS. On every homework this semester, you must put a box around each answer. Also show your working (but don't put it in a box). You do not need to box your graphs, or box whole proofs.

And **staple** your homework together. Thank you.

1. 2.1 #2cd
2. 2.1 #8aiii and also compute the instantaneous velocity at  $t=1$  (using calculus).
3. 2.2 #4 (note the hint at the website Tools for Enriching Calculus).
4. 2.2 #21
5. 2.4 #2
6. We know  $\lim_{x \rightarrow 2} x^3 = 8$ . Let  $\varepsilon > 0$ . Find a number  $\delta$  such that if  $|x - 2| < \delta$  then  $|x^3 - 8| < \varepsilon$ .
7. We know  $\lim_{x \rightarrow \pi/3} \cos x = 1/2$ . Find a number  $\delta$  such that if  $|x - \pi/3| < \delta$  then  $|\cos(x) - 1/2| < 0.1$ .