ST361 HW9 (due Thursday 11/21/13)

(a) **Show your work** in order to earn the full credit. This means that you have to present your steps or explain your reasoning for the answers you obtain, rather than just to write down the answer itself.

*Note that answers without steps or reasoning will receive 0 credits even if the answers are correct!*

(b) Remember to **staple your homework** and **write your name** on your homework. You’ll lose 5 points if not.

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1) A study was done on 36 female patients following a new treatment for cardio-vascular disease (CVD). Doctors measured the increase in exercise capacity (in minutes) over a 6-week period. The conventional treatment had produced an average increase of 2 minutes. Researchers wish to claim that the new treatment will increase the mean exercise capacity **more than** the conventional treatment. The data on the 36 female patients yielded a sample mean of 2.2. Assume the population **variation** for the new treatment is 0.81. State the hypotheses and conduct the test at the significance level of $\alpha = 0.05$. State your conclusion.

2) 8.20 (p.367), (a),(b),(c)

3) 8.29 (p.369), set the significance level $\alpha = 0.01$.

4) 8.32 (b) (p.369), set the significance level $\alpha = 0.05$.

5) 8.74 (p.398), here we assume normality of the data and set $\alpha = 0.05$. 

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