MTH 3210 Lab 3 **Answer Sheet**

Can be handed in Tue., Apr. 30

1 Part A

1.1 Change in Blood Pressure Data Set

1. NA
2. ***Don't print the histogram***, just use it to answer the following question.

   How does the histogram support the assumption that the sample came from a normal distribution?

3. Give the following values:

   $t_{0.005}$ = ----------

   $t_{0.025}$ = ----------

   $t_{0.05}$ = ----------

4. Give the following confidence intervals and answer the questions:

   90% confidence interval = ----------

   95% confidence interval = ----------

   99% confidence interval = ----------

   What happens to the **width** of the confidence interval as the level of confidence increases?

   Based on the confidence intervals of Step 4, is it plausible that the true mean change in

blood pressure μ is equal to **zero** (i.e. that calcium results in **no change** in blood pressure)? Explain your answer.

2 Part B

2.1 Political Poll Results

1. Give the **95% confidence interval** for the true (unknown) population proportion that supports Carsen.

   95% confidence interval = _____

   Based on the confidence interval, how big is the **margin of error** in the estimate 0.52 of the true population proportion?