[MATH 105 EXAM II REVIEW TOPICS]

(use this to make sure you are ready)

The exam will be over chapter 9. To get ready, review homework, quiz problems, in class worksheets, and work through the suggested mindscapes at the end of this sheet. Do not just read over completed work – redo the problems without looking at the answers and time yourself! The test is taken in a timed environment – so not only should you know how to do these problems, but you should be able to do them quickly. If you have completed your online homework, you may view the solutions by going to the problem and clicking on "show solution". If you have not completed the homework, you should do that before the exam. You will be allowed a calculator and a 3x5 note card with notes on both sides.

(points of emphasis on exam II**)**

- How to make and read graphs
  - bar charts
  - histograms
  - stem and leaf plots
  - box and whisker plots
  - dot plots
  - know the difference between bar charts and histograms!
- How to compute mean, median, mode, and the 5-number summary of a data set.
- An understanding of bias in a data collection and misrepresentations in a graph
- How the mean median and mode are affected by outliers (data values far away from the main cluster of data)
- How to estimate the mean and median from a histogram
- An understanding of the shape of graphs (uniform, normal, skew left, skew right)
- An understanding of the idea of standard deviation as a measure of how far a typical data point is from the mean
- How to compute z-score
- An understanding of the normal distribution (including the percentage of data that lies between various standard deviations from the mean)
- An understanding of confidence intervals, confidence levels, and margins of error (our margins of error will always be calculated at a 95% confidence level).
  - Know what increasing the width of an interval does to the confidence level
  - Know how gathering more data affects your margin of error at a 95% confidence level

(suggested practice problems from the book**)**

- Section 9.2 "mindscapes" 1-10, 13, 15, 23, 25, 26
- Section 9.3 "mindscapes" 1-5, 9-16
- Section 9.4 "mindscapes" 1-3, 8, 9, 13, 14, 21-24