

Name:
PIN:

MATH 1342

Quiz 5.3

A statistics class with a large number of students has scores on an exams that are normally distributed. The mean for the exam is 72.4 and the standard deviation is 8.9. For each of the following, draw an accurate picture of the normal curve for the situation you are ask to solve, as well as answering the questions that are asked. Using the calculator is preferred (normalCDF and/or invNorm).

- (1) What is the probability that a randomly selected student from this class had a score that was greater then 89.5? Given this value, what is  $P(72.4 < x < 89.5)$ ? (Give your answer to the nearest thenth of a percent or three decimal digits.)

- (2) What is the interval of scores that represents the middle third (33.3%) of the scores on this exam? (Round to the nearest tenth or one decimal digit.)

- (3) One-fifth of the students scored below what value on this exam? (Round to the nearest tenth or one decimal digit.)