

## EE 381 Homework 5

This homework is due with additional parts in dropbox (beginning of laboratory section) on 5-3-2021.

### Percentiles

For the reader not familiar with percentiles this subject can be reviewed.

- 1.) The national average SAT score (for Verbal and Math) is 1028. If we assume a normal distribution with a population standard deviation of 92, what is the 90<sup>th</sup> percentile score? What is the probability that a randomly selected score exceeds 1200?

- 2.) A teacher gives a 20-point test to 10 students. The scores are:

18, 15, 12, 6, 8, 2, 3, 5, 20, 10

Find the percentile rank of a score of 12.

Find the value corresponding to the 25<sup>th</sup> percentile.

The mean response time and the standard deviation in a multi-user computer system are known to be 15 seconds and 3 seconds, respectively. Estimate the probability that the response time is more than 5 seconds from the mean. Hint: Tchebyshev inequality.