

M111 Math as a Human Pursuit SAT Scores and the Normal Distribution

Use the web site (select the Indiana 2011 report)

<http://professionals.collegeboard.com/data-reports-research/sat/cb-seniors-2011>

Assuming a **normal distribution** of the SAT scores, answer the following questions regarding College Bound Seniors 2011 in Indiana (Table 1, page 1)

1. Write down the following:

Mathematics SAT score

Mean:

Standard Deviation (SD):

Critical Reading SAT score

Mean:

Standard Deviation (SD):

2. The College has a mathematics proficiency requirement. One way incoming students can meet this requirement is by obtaining a score of 440 on the mathematics portion of the SAT.

a) To what percentile for students in Indiana does this correspond?

b) What percentage of Indiana students meet this minimum SAT score requirement?

3. A college wants to set standards for a new scholarship called the Dean Scholarship limited to students in Indiana. They want to select students for recruiting for this scholarship who are in both the top 15% in mathematics scores and the top 15% in critical reading scores. What should be the minimum math and minimum critical reading scores they should consider?

4. Under intended major determine the following percentile rankings for 2011 Indiana College bound seniors (page 13):

Major	Crit. Reading SAT	Crit. Reading Percentile	Math SAT	Math Percentile
Mathematics				
English Language and Literature				
Education				