

**Content Standards:**

- To describe the properties of the normal distribution.
- To use the normal distribution to calculate probabilities as well as statistics associated with intervals within the normal distribution.

**Process Standards:**

- Students will demonstrate effective communication skills when presenting information in written form.

**Task:**

Below you will find the work another student did to answer the following problem. The student made a mistake when they solved the problem. Find the student's mistake, explain to them what they should have done, and correctly solve the problem.

*As an admissions officer for the University of Illinois, you decide who will be accepted into the freshman class. The new university guidelines allows only students that score within the top 10% of students taking the ACT to be considered for admission. This year's test has a mean score of 23 and a standard deviation of 2.5.*

**What is the lowest ACT score needed in order to be considered for admission?**

**Student Work:**

**1. What mistake did the student make when solving the problem?**

**2. What should the student have done instead? Explain to the student how they should have solved the problem.**

**3. Solve the problem correctly.**