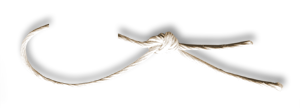
The distribution of scores on a recent test closely followed a Normal distribution with a mean of 22 points and a standard deviation of 4 points.

Chapter

2



1. What proportion of students scored at least 25 points on this test?

**“FRAPPY”**

{Free Response AP Problem...Yay!}

The following problem is a practice Advanced Placement Statistics Examination.

Your task is to generate a complete, concise statistical response in 15 minutes. You will be graded based on the AP rubric and will earn a score of 0-4. After grading, keep this problem in your binder for your AP Exam preparation.

**E P I**

**Total:\_\_/4**

1. What is the 31st percentile of the distribution of test scores?

**E P I**

1. The teacher wants to transform the test scores so that they have an approximately Normal distribution with a mean of 80 and a standard deviation of 10 points. To do this, she will use a formula in the form: *new score = a + b (old score)* Find the values of ***a*** and ***b*** that the teacher should use to transform the distribution of test scores.

**E P I**

1. Before the test the teacher gave a review assignment for homework. The maximum score on the assignment was 10 points. The distribution of scores on this assignment was 9.2 points with a standard deviation of 2.1 points. Would it be appropriate to use a Normal to distribution to calculate the proportion of students who scored below 7 points on this assignment? Explain.

**E P I**