Statistical Reasoning Name:

Normal Standard Distributions

**Using Table A in Reverse**

Last week we discussed that Tiger Woods’ drives follow a Normal distribution with a mean of 304 yards and a standard deviation of 8 yards.

What distance would a hall have to travel to be at the 80th percentile of Tiger’s drive lengths?

*Step One: Draw a picture.*

*Step Two: Use the table to find the z-score.*

*Step Three: Set up and solve an equation to “unstandardized” the z-score to a value of x*.

Example 2: Scores on the Wechsler Adult Intelligence Scale for 20- to 34-year-olds are approximately Normally distributed with mean 110 and standard deviation 25. How high must a person score to be in the top 25% of all scores?

Statistical Reasoning Name:  
Using Table A in Reverse Practice

1) The average performance of males on the SAT is approximately Normal. Male scores had a mean of 533 and a standard deviation of 118. Find the 85th percentile of the SAT Math distribution for males. Show all work.

2) Scores on the SAT verbal test in recent years follow approximately the N(505, 110) distribution. How high must a student score in order to place in the top 10% of all students taking the SAT?