**Problem​ ​Statement​ ​1:**

You take the SAT and score 1100. The mean score for the SAT is 1026 and the standard

deviation is 209. How well did you score on the test compared to the average test taker?

Solution:

Mean of the SAT scores = 1026

Standard Deviation = 209

My SAT score = 1100

Deriving the Z value from the above data,

Z = X – mean / Standard Deviation

1100 – 1026 / 209 = 0.354

This implies, my SAT score is above by 0.354 Standard deviation points.

If we need to calculate the percentile, going by the left Z table,

0.6368 is the p value from the z table.

So, 63.68 % of the candidates are below my SAT score