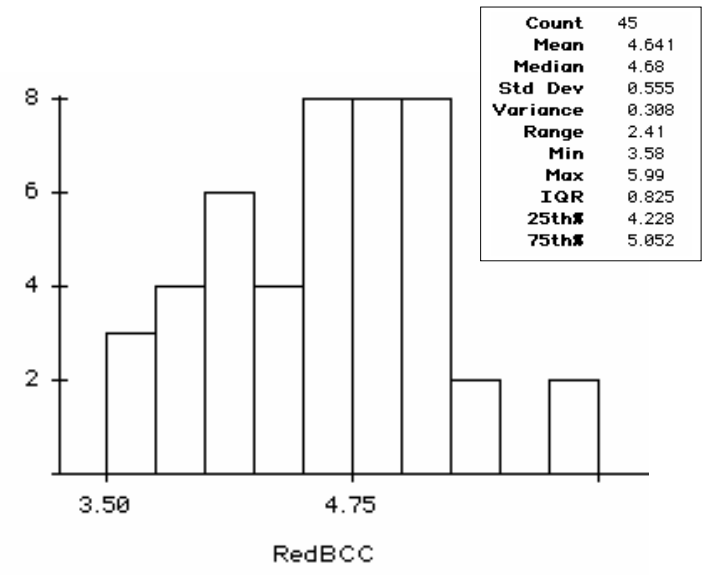
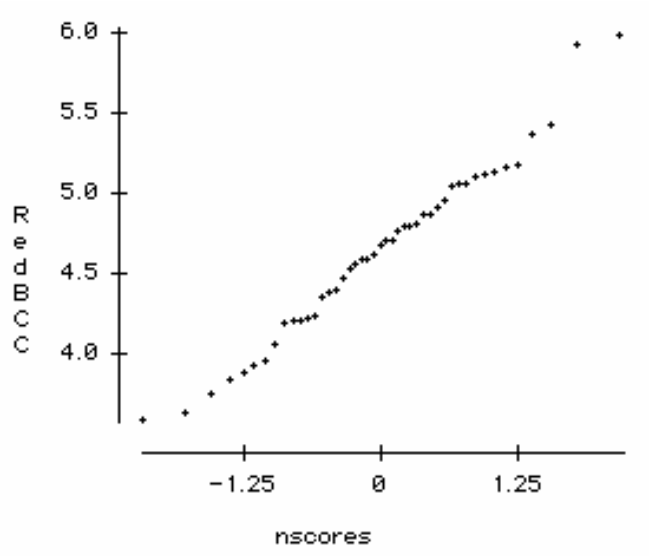
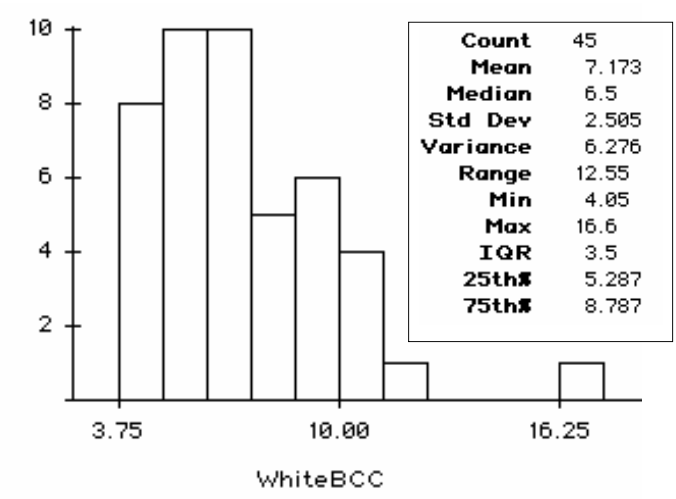
Red Blood Cell Counts
Plots created using Data Desk (DDXL)



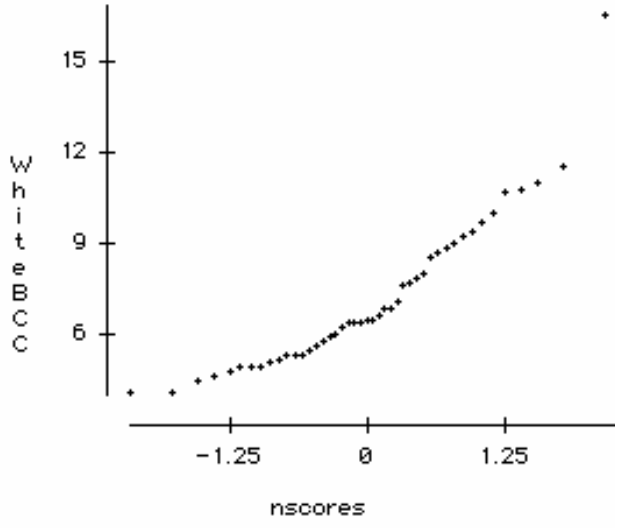
Normal probability plot – RBCC



White Blood Cell Counts



Normal probability plot-WBCC



Example

In planning for hot water requirements, the manager of the Luxurion Hotel finds that guests spend a mean of 11.4 min. each day in the shower. Assume that the shower times are normally distributed with a standard deviation of 2.6 min.

a) Find the percentage of guests who shower more than 12 min.

b) The hotel has installed a system that can provide enough hot water provided that the mean shower time for 84 guests is less than 12 min. If the hotel currently has 84 guests, find the probability that there will not be enough hot water. Does the current system appear to be effective?

c) If you bought one bag of water-softener salt and it weighted 39 lb, would you consider this evidence that the company's claim is incorrect? Explain.

d) If you bought 10 bags of water-softener salt and their mean weight was 39 lb, would you consider this evidence that the company's claim is incorrect? Explain.

Example (from Weiss, *Introductory Statistics*, 8th Edition, page 351)

A brand of water-softener salt comes in packages marked "net weight 40 lb." The company that packages the salt claims that the bags contain an average of 40 lb of salt and that the standard deviation of the weights is 1.5 lb. Assume that the weights are normally distributed.

a) Obtain the probability that the weight of one randomly selected bag of water-softener salt will be 39 lb or less, if the company's claim is true.

b) Determine the probability that the mean weight of 10 randomly selected bags of water-softener salt will be 39 lb or less, if the company's claim is true.