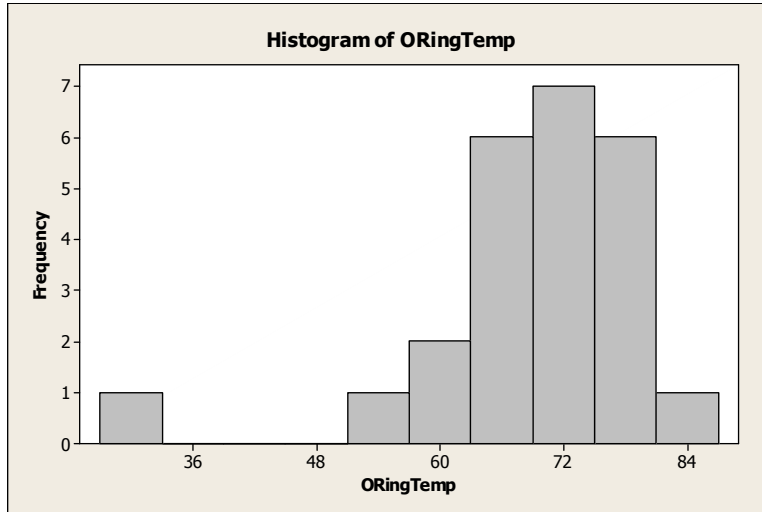


Stat 345 – Summer, 2006: Quiz 1, Solution

1. The summary statistics from Minitab are given below with the mean, median, standard deviation, min, max, first and third quartiles highlighted.

Variable	N	Mean	StDev	Minimum	Q1	Median	Q3	Maximum
ORingTemp	24	67.96	10.47	31.00	66.25	70.00	75.00	81.00

2. From the histogram below we see that the distribution of the data is unimodal and left skewed. The smallest observation, 31° F, is separate from the rest of the data and therefore an outlier.



3. Removing 31° F from the data set gives the following summary statistics. These are not too different from the original data, but the mean and first quartile (Q1) have increased slightly. In addition the data is less spread out, reflected in a smaller standard deviation (7.06° as opposed to 10.47° for the full data). The histogram is still unimodal but closer to being symmetric (there's still a small left tail so it is slightly left skewed).

Variable	N	Mean	StDev	Minimum	Q1	Median	Q3	Maximum
ORingTemp	23	69.57	7.06	53.00	67.00	70.00	75.00	81.00

