

STAT 345 - Summer, 2006: Quiz 1 (take home)
BASED ON SECTION: INTRODUCTION

*This handout assumes you have access to a Microsoft/Intel P.C. with world-wide-web access and Minitab 12.0 or higher installed. There are several machines in the Engineering (south classroom) and C.I.R.T. Pods set up with Minitab. You do not need a UNM computer account to use Minitab at these Pods. A trial version of Minitab may be downloaded from the site <http://www.e-academy.com/minitab> that is usable for 30 days from installation. Look for **Free Trial** on the web page. Minitab may also be leased from the same site though this is not necessary for this course.*

Handout 2 on the course web page gives detailed instructions on how to perform this assignment using the DDT data set which was discussed in class.

Data are given on the joint temperatures of the O-rings ($^{\circ}\text{F}$) for each test firing or actual launch of the space shuttle rocket motor for the Challenger space shuttle. You can find the dataset on the course website and on the back of this handout. Perform the analysis on this data.

1. Obtain the mean, median, standard deviation, minimum, maximum, first quartile Q_1 , and third quartile Q_3 from Minitab and report them.
2. Obtain, from Minitab, a histogram and comment on the shape of the histogram. For example, discuss the presence of outliers, whether the distribution is unimodal, multimodal, symmetric or skewed, etc.
3. Delete the outlier and repeat, discussing what changed.

If you are having difficulties with Minitab and can not complete the assignment, email me with a description of what you tried to do, ask me after class, or see me during my office hours.

Challenger O-Ring temperature Data:

ORingTemp

66

70

69

68

67

72

73

70

57

63

70

78

67

53

67

75

70

81

76

79

75

76

58

31

(Data originally from <http://www.quantlet.org/mdbase/downloadtoc.jsp>)