Normal Distribution MINITAB Applications

We will test our EPA mileage data for normality. After loading the EPAGAS data from our CD we have 100 data value in column C1 of our worksheet. (See Figure 1.) Next we select **Stat**, **Basic Statistics**, **Display Descriptive Statistics…** in that order. (See Figure 2.) Next, in the "Display Descriptive Statistics" window (See Figure 3.) enter MPG under **Variables:** and click on the option **Graphs**. Select "Histogram of data with normal curve" and then **OK** (See Figure 4.) and the **OK** again.   (See the result in Figure 5.)
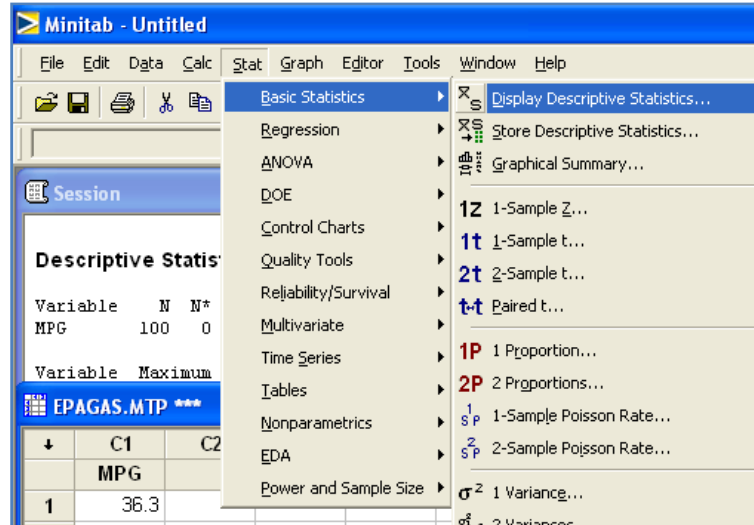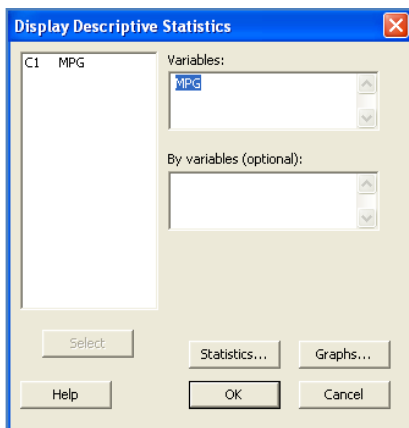
Figure 1

Figure 2

Figure 3
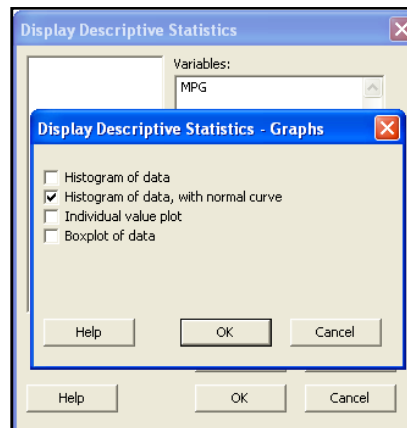
Figure 4
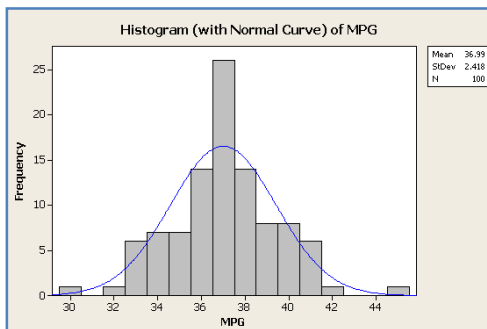
Figure 5

Here are the descriptive statistics.

Descriptive Statistics: MPG

Variable	N	N*	Mean	SE Mean	StDev	Minimum
MPG	100	0	36.994	0.242	2.418	30.000

Variable	Q1	Median	Q3	Maximum
MPG	35.625	37.000	38.375	44.900

Next we will produce a normal probability plot for the MPG data.

Select **Graph** and then select **Probability Plot…** In the "Probability Plots" window (Figure 6.) select **Single** and then **OK**. In the "Probability Plot – Single" window (Figure 7.) enter MPG under **Graph variables:** and select **OK.**
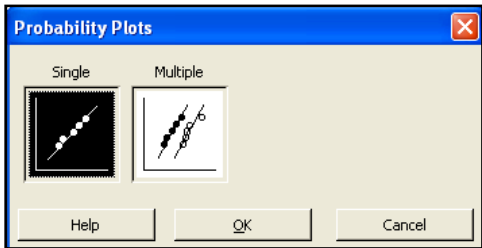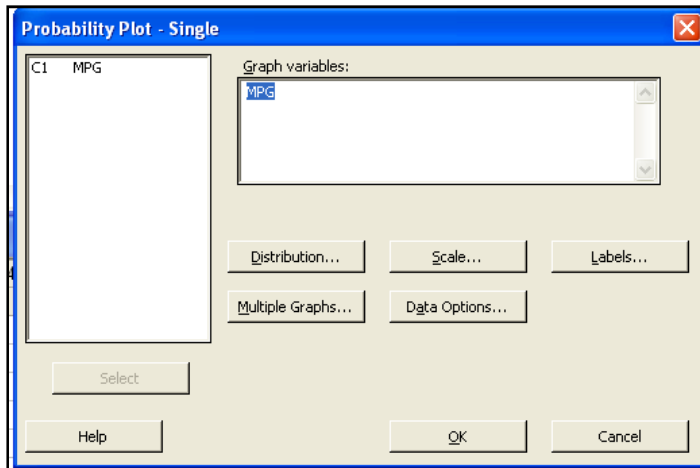

Figure 6

Figure 7

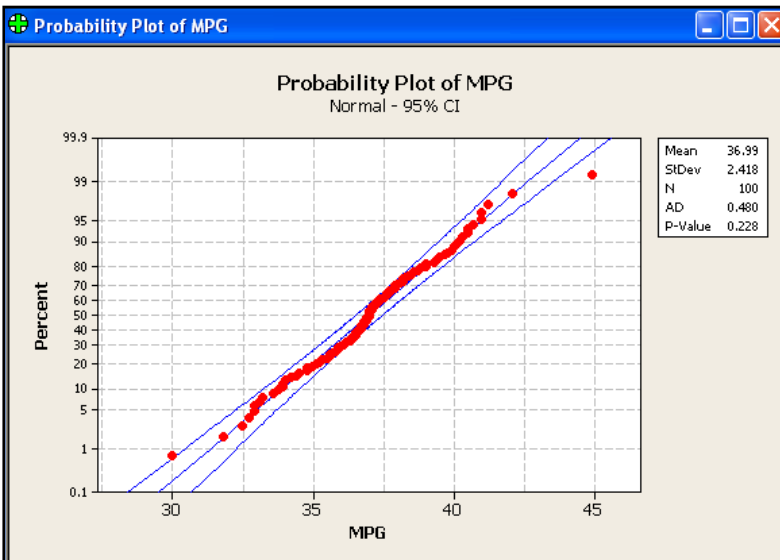Our probability plot of MPG appears in Figure 8.

Figure 8