1. You are presented with the rushing yards of the top running backs in the NFL from a given Sunday. You are going to analyze the data by using our graphing calculator and some previous knowledge. Here is a table that presents the data:

<table>
<thead>
<tr>
<th>Player</th>
<th>Total Yards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brian Westbrook</td>
<td>116</td>
</tr>
<tr>
<td>Clinton Portis</td>
<td>150</td>
</tr>
<tr>
<td>Corey Dillon</td>
<td>103</td>
</tr>
<tr>
<td>Priest Holmes</td>
<td>116</td>
</tr>
<tr>
<td>Duce Staley</td>
<td>146</td>
</tr>
<tr>
<td>Tiki Barber</td>
<td>130</td>
</tr>
<tr>
<td>Ahmand Green</td>
<td>164</td>
</tr>
<tr>
<td>Emmit Smith</td>
<td>112</td>
</tr>
</tbody>
</table>

A. Who has the most yards in this week? ____________________________

B. Who has the least yards in this week? ____________________________

C. What is the range of the total rushing yards for this week? (The range is the difference between the maximum and the minimum rushing yards)
   ____________________________
2. Now let's do some work on the TI-83 graphing calculator. A picture of your TI-83 in attached with all the keys you will be using circled.

A. Turn on your TI-83 by pressing the ON key.

B. Now it is time to clear all equation in your calculator. This is done by pressing the \( Y= \) and the CLEAR keys for each equation. When you are finished your screen should look like this:

```
Y1 =
Y2 =
Y3 =
Y4 =
Y5 =
Y6 =
Y7 =
```

C. Next, press 2nd\[Y=\]. This will bring up the STAT PLOT screen. Select 4: PlotsOff. Press ENTER.

D. Go back to the STAT PLOT screen, select 1: Your screen will be similar to the one below:

```
1:Plot1...Off
  \:: L1 L2
2:Plot2...Off
  \:: L1 L2
3:Plot3...Off
  \:: L1 L2
4:PlotsOff
```

E. Now Press [ENTER]. This will bring up the graph format screen. We are going to select the “box and whisker” graph and Xlist we have L1. The box and whisker plot is highlighted in the picture.

```
Plot1 Plot2 Plot3
OF Off
Type: [ ]
Xlist: L1
Freq: 1
```

A screen will appear like this:

If there are no numbers in $L_1$, you can erase them by scrolling up and highlighting $L_1$ and pressing the \text{CLEAR} key. See the picture above to clarify this step.

G. Now we can enter the data from the first page. Enter each number and press $\text{ENTER}$. (Example: Type in 116 and press $\text{ENTER}$, do the same for each number in the table.)

H. Hit the \text{GRAPH} key. Your screen might look like this:

Now we need to fix the window so the box and whisker graph can be seen. This is done by pressing the \text{WINDOW} key. Format your window to match the one below.

Press the \text{GRAPH} button and the box and whisker graph will appear.
I. Press \textbf{TRACE}. Now we are going to explore the parts of a box and whisker graph. By using the left and right arrow keys you can find the five parts of the graph. Below is the plot, label each with what the bottom line of the calculator reads. The \textit{minX} has been done as an example:

\begin{figure}
\centering
\includegraphics[width=0.5\textwidth]{box_whisker_graph.png}
\caption{Box and whisker graph with data points and labels.}
\end{figure}

1. \textit{minX} = 103

2. \underline{______} = \underline{_______}

3. \underline{______} = \underline{_______}

4. \underline{______} = \underline{_______}

5. \underline{______} = \underline{_______}

G. The \textit{minX}, \textit{maxX}, and \textit{med} are the minimum, maximum and the median of our data. These are familiar terms. The \textit{Q1} and \textit{Q3} are the first and third quartile. The first quartile value represents the 25\textsuperscript{th} percentile of the list, and the third quartile represents the 75\textsuperscript{th} percentile of the list. Below write the first and third quartile.

\begin{align*}
\text{Q1} &= \underline{\phantom{000000000}} \\
\text{Q3} &= \underline{\phantom{000000000}}
\end{align*}
Your TI-83 Plus

- WINDOW
- Y=
- 2nd
- STAT
- ON
- Arrow Keys
- TRACE
- GRAPH
- CLEAR
- ENTER
- ON

- Arrow Keys
- TRACE
- GRAPH
- CLEAR
- ENTER
- ON
- 2nd
- STAT
- ON
- ON