

## TECHNOLOGY CORNER for Section 1.3, Page 59

### 3. Making Box Plots on HP Prime

The HP Prime can display up to 5 boxplots (box and whisker plots), each with or without outliers, in the same viewing window. Let's use the calculator to make side-by-side boxplots of the travel time to work data for the samples from North Carolina and New York.

- Enter the travel time data for North Carolina in list D1 and for New York in list D2 of the Statistics 1Var app. The data can be found on Page 52 of the textbook.

- Press and tap the **Statistics 1Var** app icon
- Type the values into lists D1 and D2

Statistics 1Var Numeric View				
	D1	D2	D3	D4
1	5	10		
2	10	30		
3	10	5		
4	10	25		
5	10	40		
6	12	20		
7	15	10		
8	20	15		
9	20	30		
10	25	20		
5				

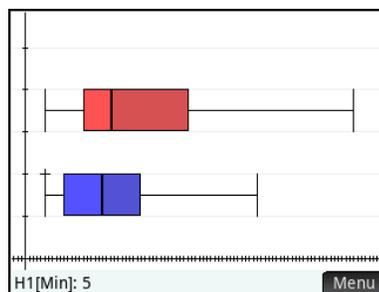
- Set up the two boxplots in Symbolic view of the app

- Press to open Symbolic view
- Set **H1** to use D1 for the data and set **Plot1** to be *BoxWhisker* (tap to make a selection)
- Set **H2** to use D2 for data and set **Plot2** to be *BoxWhisker*

Statistics 1Var Symbolic View	
√ H1: D1	
Plot1: Box Whisker	
Option1: No outliers	
√ H2: D2	
Plot2: Box Whisker	
Option2: No outliers	
H3:	
Choose plot type	
Choose	√

- Use the *Autoscale* option to display the side-by-side boxplots. Then tap or trace to view the five-number summary.

- Press and tap **Autoscale**
- Tap anywhere on the display to move the tracer and view the 5-number summary (or use and )



- You can also view the five-number summaries for both data sets in a table

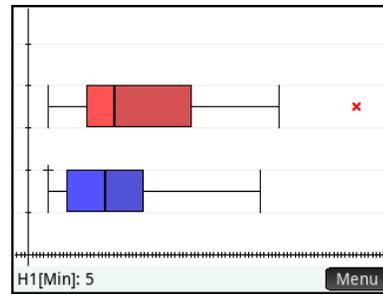
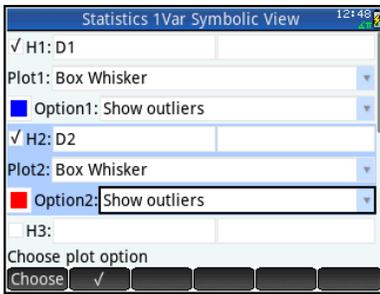
- Press to enter the Numeric view and tap .

Statistics 1Var Numeric View		
	H1	H2
n	15	20
Min	5	5
Q1	10	15
Med	20	22.5
Q3	30	42.5
Max	60	85
ΣX	337	625
ΣX <sup>2</sup>	10,819	28,625
$\bar{x}$	22.4666666667	31.25
sX	15.2309209302	21.8773494979
Number of items		

- Press to exit out of the statistic display

- You can also show outliers in the side-by-side boxplots by selecting *Show outliers* in the Symbolic screen.

- Press and tap next to Option 1 in H1 and H2 and select *Show outliers*



- Press  to see the outlier in North Carolina's data