

TECHNOLOGY CORNER for Section 6.1, Page 354

11. Analyzing Random Variables on HP Prime

Let's explore what HP Prime can do using the random variable X = Apgar score of a randomly selected newborn.

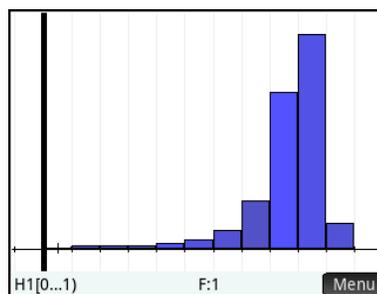
- Start in the Numeric view of the Statistics 1Var app by entering the values of the random variable in list D1. Enter the corresponding frequencies in list D2 (multiply the probabilities by 1000). The data can be found on Page 353.
 - Press **Apps** and tap the **Statistics 1Var** app icon
 - Type the values into list D1 and the frequencies in D2

	D1	D2	D3	D4
1	0	1		
2	1	6		
3	2	7		
4	3	8		
5	4	12		
6	5	20		
7	6	38		
8	7	99		
9	8	319		
10	9	437		
0				

- To graph a histogram of the distribution, set up H1 in Symbolic view of the app.
 - Press **Symb** to open the Symbolic view; press **Shift** **Esc** to return the view to its default settings. Change the H1 **Freq** field to use D2 as the frequencies and choose **Histogram** for **Plot 1**.

Statistics 1Var Symbolic View	
✓ H1:	D1 D2
Plot1:	Histogram
Option1:	
H2:	
Plot2:	Histogram
Option2:	
H3:	
Choose plot type	
Choose	✓

- Plot the histogram in Plot view.
 - Press **View Copy** and tap **Autoscale**



- Calculate the mean and standard deviation of the random variable
 - Press **Num** to enter the Numeric view
 - Tap **Stats** to view summary statistics for the distribution.
 - Tap and drag to scroll to the bottom of the list (or use **Shift** **Down Arrow**) to see the mean and standard deviation

Statistics 1Var Numeric View	
H1	
Med	8
Q3	9
Max	10
ΣX	8,128
ΣX^2	68,130
\bar{x}	8,128
sX	1.43794425611
σX	1.43722510415
serrX	4.54717899767E-2
ssX	2,065,616
Sum of squared deviation of X	
More	OK

- Tap **OK** to return to the Numeric view