

# Statistical Measures and Histograms (using calculator)

Most statistical calculations can be completed by the calculator. Suppose we collected the weights of 35 randomly selected students. Is this data a sample or a population? at Horton.

140	120	130	138	121	125	116
145	150	112	125	130	120	130
131	120	118	155	160	165	102
95	108	112	150	175	173	115
102	156	172	125	130	110	138

L1	L2	L3	1
140	-----	-----	
145			
131			
95			
102			
120			
150			
L1(D)=140			

Enter the data using  
`[STAT] > Edit > [ENTER]`

Enter the data in L1, L2, etc  
 (be sure your list is cleared of old data)

EDIT	TESTS
1: 1-Var Stats	
2: 2-Var Stats	
3: Med-Med	
4: LinReg(ax+b)	
5: QuadReg	
6: CubicReg	
7: QuartReg	

← To get a statistical analysis of your data:  
`[STAT] > CALC > 1: 1-VAR STATS`  
`> [ENTER]`

1-Var Stats L1

← select L1 or L2 etc  
 and press `[ENTER]`

1-Var Stats
$\bar{x}=131.8285714$
$\Sigma x=4614$
$\Sigma x^2=623804$
$s_x=21.3972899$
$\sigma_x=21.0760334$
$n=35$

← mean weight is 131.8 lbs  
 ← use  $s_x$  since this is a sample.  
 $s_x = 21.4$  lbs

Sample size

1-Var Stats
$n=35$
$\text{minX}=95$
$Q1=116$
$\text{Med}=130$
$Q3=150$
$\text{maxX}=175$

← scroll down to get more information  
 ← minimum weight (95 lbs)  
 ← median 130 lbs (1/2 sample is above 130, 1/2 sample is below 130)  
 ← maximum weight (175 lbs)

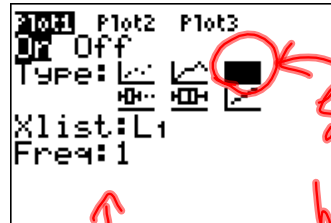
# Creating a Histogram

Create a histogram by using

2nd y= to turn on stat plot.

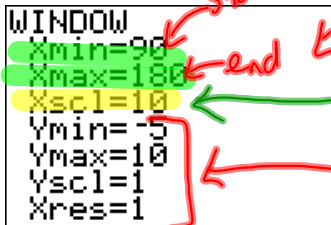


ENTER



Select

histogram.



start

end

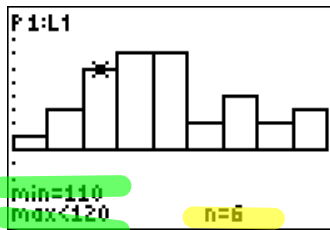
Select window

Turn Plot 1 on

binwidth (choose to allow for 5-10 bars on

allow enough room for max frequency (histogram)

start in negative leave a blank space at bottom of graph



← use trace to find frequency for a particular bin.

(scroll along sideways)

bin:

100-120

↑ included    ↑ not included

↑ frequency

\* Be sure that you have no equations entered in y=