

Chapter 6 / Example 1

Drawing a bar chart from a frequency table

In the opening problem, you studied the marks of 32 students who took a test with maximum mark 10. Their scores are listed below:

0, 1, 1, 2, 2, 2, 3, 3, 4, 4, 4, 5, 5, 5, 5, 5, 6, 6, 6, 6, 6, 7, 7, 7, 7, 7, 7, 8, 8, 8, 8, 9, 10.

Construct a frequency table for this data, and draw a bar chart for it.

Press **[stat]** 1:Edit and press **[enter]**

Type each of the numbers from 0 to 10 in the first column.

Press **[enter]** or **[↓]** after each number to move to the next cell.

Note: If the list contains other numbers, you can clear it by pressing **[stat]** 4:ClrList and press **[enter]**. The home screen displays ClrList. Press **[2nd]** **[1]** **[L1]** and press **[enter]**. Press **[stat]** 1:Edit and press **[enter]** to return to the table.

L1	L2	L3	L4	L5	1
0					
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

L1(1)=0

Press **[▶]** to move to the next column.

Enter the frequencies of each of the scores in the second column.

L1	L2	L3	L4	L5	2
0	1				
1	2				
2	3				
3	2				
4	3				
5	5				
6	4				
7	6				
8	4				
9	1				
10	1				

L2(1)=1

Press **[2nd]** **[f1]** **[stat plot]**.

Press **[enter]**.

STAT PLOTS	
1:Plot1...On	
▢ L1 L2	
2:Plot2...Off	
▢ L1 L2	
3:Plot3...Off	
▢ L1 L2	
4:PlotsOff	
5:PlotsOn	

Navigate through the list using **[▶]** **[◀]** **[▲]** **[▼]** keys.

Select Type **[Bar]**, Xlist **L1** and Freq **L2**. Choose any color.

Press **[enter]** after each choice.

To enter **L2** press **[2nd]** **[2]** **[L2]**

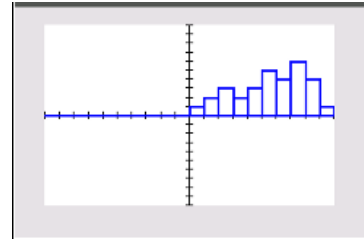
Plot1 Plot2 Plot3	
On Off	
Type: ▢ ▢ ▢ ▢ ▢ ▢	
Xlist:L1	
Freq:L2	
Color: BLUE	

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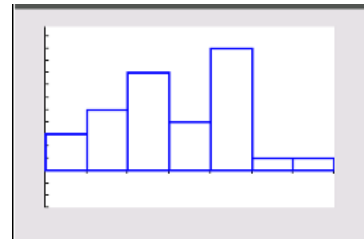
Press **[f5]** **[graph]**.

The GDC displays a bar chart with the default axes.



For a better view of the bar chart press **[zoom]** 9:ZoomStat.

The bar chart now fits the window but the bars are the wrong widths to match the frequencies.



Press **[f2]** **[window]**.

Change Xscl to 1 and press **[enter]**.

You can also change Ymin to 0 and Ymax to 7 (1 more than the highest frequency).

```
WINDOW
Xmin=0
Xmax=11.66666667
Xscl=1
Ymin=0
Ymax=7
Yscl=1
Xres=1
ΔX=.04419191920454
TraceStep=.08838383840909
```

Press **[f5]** **[graph]**.

The GDC displays a bar chart with the test score on the x-axis, and the frequency (that is, the number of students who attained each score) on the y-axis.

