

## Chapter 2 / Example 5

# Frequency histograms

The data shown in the table was collected for Hawkmoth caterpillars, measured to the nearest cm.

<b>Length, l (cm)</b>	4	5	6	7	8	9
<b>Frequency</b>	19	56	74	45	5	1

Use the data to draw a frequency histogram.

The intervals indicated by this table are  $3.5 \leq I < 4.5$ ,  $4.5 \leq I < 5.5$ , etc.

Press **STAT** 1:Edit and press **ENTER**

Type the lower values of each of the class intervals in the first column. Type 3.5, 4.5, 5.5, ... 8.5

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.

[illegible]

Press  to move to the next column.

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

[illegible]

Press **[2nd]** **[F1]** **[STAT PLOT]**.

Press **ENTER**.

```

STAT PLOTS
1:Plot1...Off
  [blue] L1 L2
2:Plot2...Off
  [red] L1 L2
3:Plot3...Off
  [green] L1 L2
4:PlotsOff
5:PlotsOn



```

Press **ENTER** and navigate through the list using **▶** **◀** **▲** **▼** keys.

Select Type , Xlist L<sub>1</sub> and Freq L<sub>2</sub>. Choose any color.

Press **ENTER** after each choice.

To enter  $L_2$  press **2nd** **2** **[L2]**

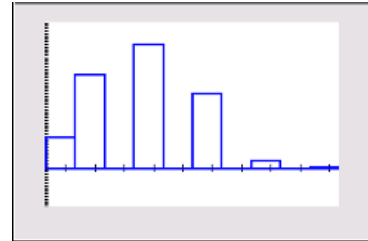
Plot1 Plot2 Plot3  
On Off  
Type:        
Xlist:L1  
Freq:L2  
Color: BLUE

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Press **[ZOOM]** 9:ZoomStat.

The GDC displays a bar chart with that fits the window but the bars are the wrong widths to match the frequencies.



Press **[F2]** **[WINDOW]**.

Change Xmin to 3.5, Xmax to 9.5, Xscl to 1

Also change Ymin to -10 and Ymax to 80, Yscl to 10 and press **[ENTER]**.

```

WINDOW
Xmin=3.5
Xmax=9.5
Xscl=1
Ymin=-10
Ymax=80
Yscl=10
Xres=1
ΔX=.02272727272727
TraceStep=.04545454545454
  
```

Press **[F5]** **[GRAPH]**.

The GDC displays a histogram of the data.

