

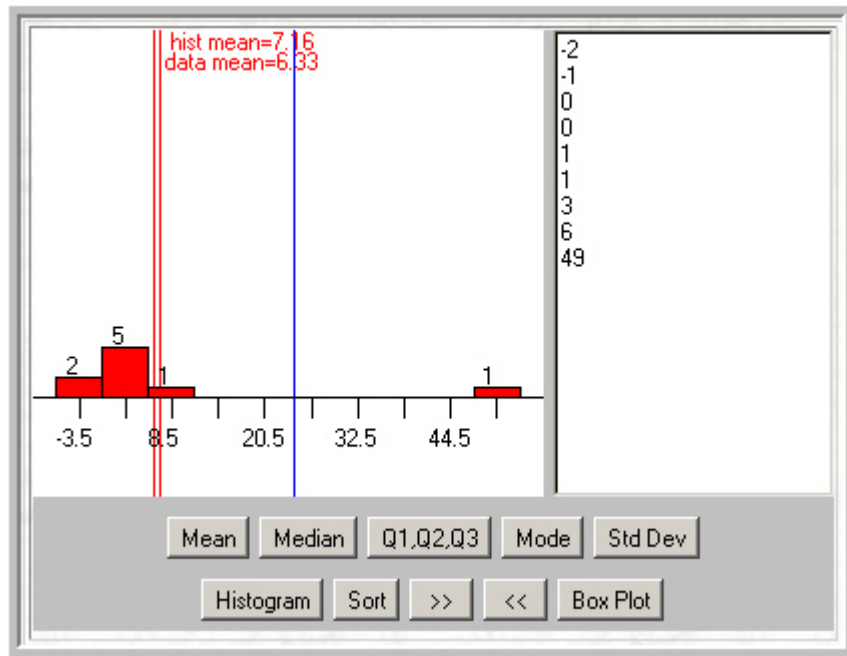
SOLUTIONS - CHAPTER 8 EXERCISES

8.1 The lowest value in the set is -2 , so this is the minimum. 49 is the highest value in the set and, therefore, is the maximum. The range is $49 - (-2) + 1 = 52$.

8.3 The mean is calculated by the following:

$$\begin{aligned}\mu &= \frac{\text{Sum of the data points}}{\text{Number of data points}} \\ &= \frac{-2 + 0 + 49 + 1 + 3 + 6 + (-1) + 0 + 1}{9} \\ &= \frac{57}{9} = \frac{19}{3} \approx 6.3333\end{aligned}$$

Applet Method Enter the data, press “Mean” and move the blue triangle until the data is balanced. Look at the data mean.



Therefore, the mean is approximately 6.33 .

Calculator Method (TI-83) Enter the data under [STAT] → EDIT. At your home screen, go to [STAT] → CALC ↓ 1:1-VAR STATS and then add on the list name L1 and press [ENTER].

L1	L2	L3	2
-2			
-1			
0			
0			
1			
1			
3			
6			
49			
L2(x)=			

1-Var Stats L1

1-Var Stats
x̄=6.333333333
Σx=57
Σx²=2453
Sx=16.17096163
σx=15.24612883
↓n=9

Therefore, the mean = $\bar{x} = 6.3333$.

8.5 The mean is the least representative since it is higher than 8 of the 9 points in the set, while the median and mode are the same and within the middle of the majority of the data points.

8.7 In Histogram *E*, the mode is 6, since it occurs more frequently than the other values, 3,9,12, or 15.

In Histogram *F*, the mode is both 5 and 25. Since they occur equally often and more than the remaining values, 10, 15, and 20.

8.9 The value of *X* that occurs the most is 12, occurring 8 times. Therefore, the mode is 12.