

# Center and Spread of Data

**Find the mode, median, mean, lower quartile, upper quartile, interquartile range, and population standard deviation for each data set.**

- 1) Test Scores
- 37 42 48 51 52 53 54
- 54 55

- 2) Mens Heights (Inches)
- 62 64 69 70 70 71 72
- 73 74 75 77

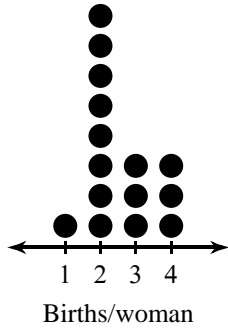
- 3) Age Assumed Office

Senator	Age	Senator	Age	Senator	Age	Senator	Age	Senator	Age
Patrick Leahy	34	Carl Levin	44	Tammy Baldwin	50	John Barrasso	54	Mike Johanns	58
Mark Pryor	39	Rand Paul	47	Barbara Boxer	52	Kay Hagan	55	John Boozman	60
Brian Schatz	40	John Cornyn	50	Claire McCaskill	53	Jerry Moran	56	Jim Risch	65
John Thune	43								

- 4) Sales Tax

State	Percent	State	Percent	State	Percent	State	Percent
Colorado	2.9	New Mexico	5.125	Maryland	6	Washington	6.5
Louisiana	4	Maine	5.5	South Carolina	6	Indiana	7
Wyoming	4	Florida	6	Kansas	6.15	New Jersey	7
Oklahoma	4.5	Idaho	6	Massachusetts	6.25	Rhode Island	7
North Dakota	5						

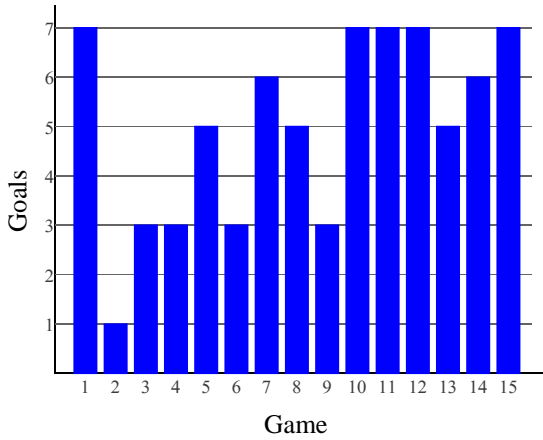
5) Birth Rate by Country



6) Length of Book Titles

# Words	Frequency
2	6
3	3
4	3
5	2
6	2

7) Goals in a Hockey Game

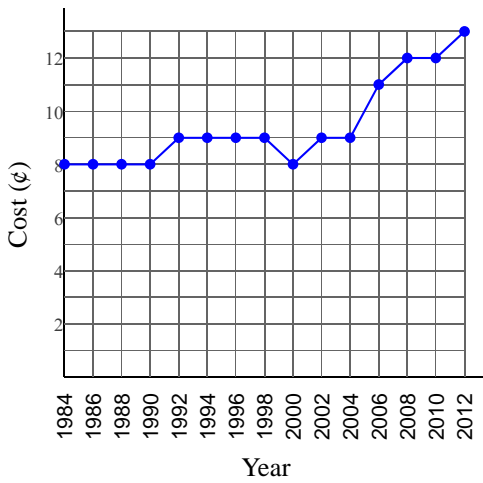


8) Boiling Point (°C)

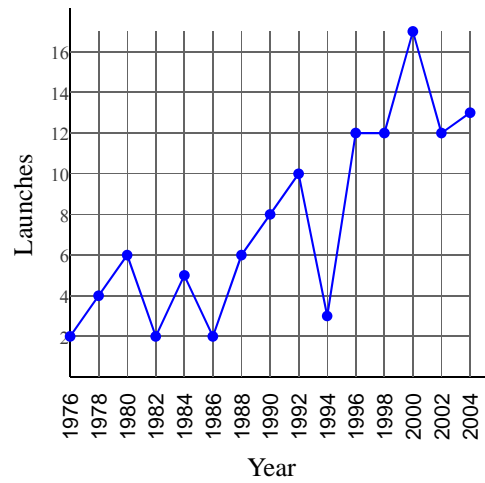
Stem	Leaf
0	1 2 3 3 3 8 9
1	8
2	2 4 9 9
3	2 3 8
4	8

Key: 1|8 = 1,800

9) Cost of Electricity, per kWh



10) European Spacecraft Launches



## Center and Spread of Data

**Find the mode, median, mean, lower quartile, upper quartile, interquartile range, and population standard deviation for each data set.**

- 1) Test Scores  
 37 42 48 51 52 53 54  
 54 55

Mode = 54, Median = 52,  
 Mean = 49.56,  $Q_1 = 45$ ,  $Q_3 = 54$ ,  
 IQR = 9 and  $\sigma = 5.83$

- 2) Mens Heights (Inches)  
 62 64 69 70 70 71 72  
 73 74 75 77

Mode = 70, Median = 71,  
 Mean = 70.64,  $Q_1 = 69$ ,  $Q_3 = 74$ ,  
 IQR = 5 and  $\sigma = 4.27$

- 3) Age Assumed Office

Senator	Age	Senator	Age	Senator	Age	Senator	Age	Senator	Age
Patrick Leahy	34	Carl Levin	44	Tammy Baldwin	50	John Barrasso	54	Mike Johanns	58
Mark Pryor	39	Rand Paul	47	Barbara Boxer	52	Kay Hagan	55	John Boozman	60
Brian Schatz	40	John Cornyn	50	Claire McCaskill	53	Jerry Moran	56	Jim Risch	65
John Thune	43								

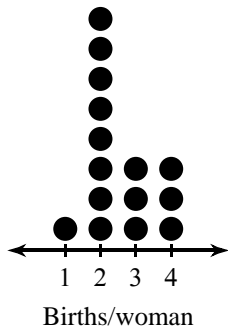
Mode = 50, Median = 51, Mean = 50,  $Q_1 = 43.5$ ,  $Q_3 = 55.5$ , IQR = 12 and  $\sigma = 8.1$

- 4) Sales Tax

State	Percent	State	Percent	State	Percent	State	Percent
Colorado	2.9	New Mexico	5.125	Maryland	6	Washington	6.5
Louisiana	4	Maine	5.5	South Carolina	6	Indiana	7
Wyoming	4	Florida	6	Kansas	6.15	New Jersey	7
Oklahoma	4.5	Idaho	6	Massachusetts	6.25	Rhode Island	7
North Dakota	5						

Mode = 6, Median = 6, Mean = 5.58,  $Q_1 = 4.75$ ,  $Q_3 = 6.375$ , IQR = 1.625 and  $\sigma = 1.14$

5) Birth Rate by Country



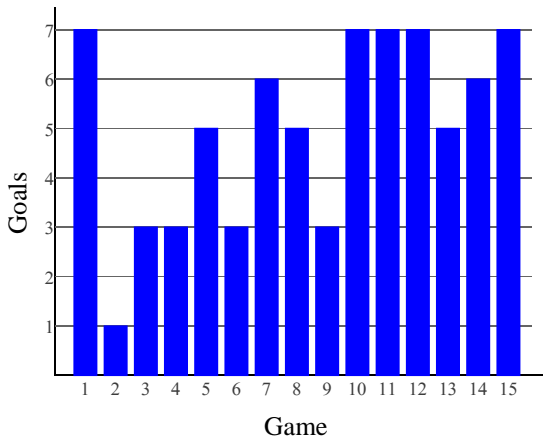
Mode = 2, Median = 2,  
 Mean = 2.53,  $Q_1 = 2$ ,  $Q_3 = 3$ ,  
 IQR = 1 and  $\sigma = 0.88$

6) Length of Book Titles

# Words	Frequency
2	6
3	3
4	3
5	2
6	2

Mode = 2, Median = 3,  
 Mean = 3.44,  $Q_1 = 2$ ,  $Q_3 = 4.5$ ,  
 IQR = 2.5 and  $\sigma = 1.41$

7) Goals in a Hockey Game



Mode = 7, Median = 5, Mean = 5,  $Q_1 = 3$ ,  
 $Q_3 = 7$ , IQR = 4 and  $\sigma = 1.9$

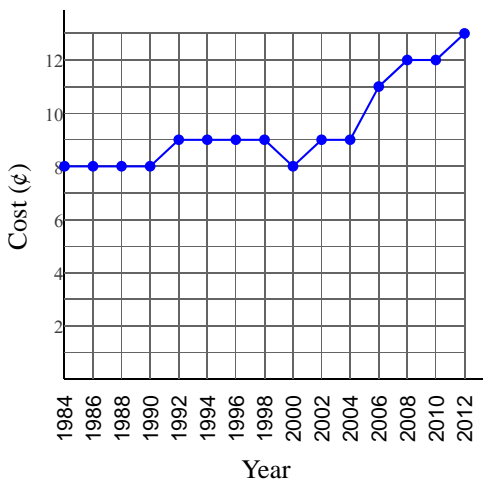
8) Boiling Point (°C)

Stem	Leaf
0	1 2 3 3 3 8 9
1	8
2	2 4 9 9
3	2 3 8
4	8

Key: 1|8 = 1,800

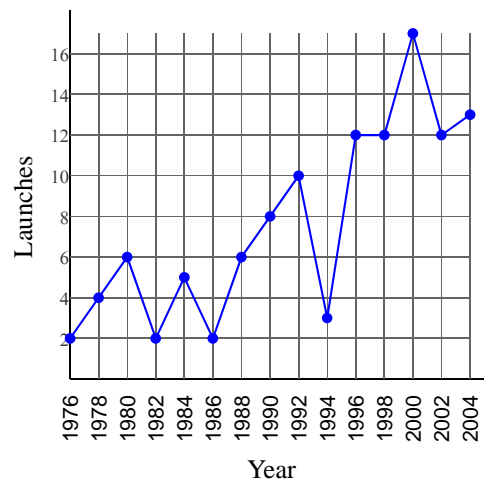
Mode = 300, Median = 2,000,  
 Mean = 1,887.5,  $Q_1 = 300$ ,  
 $Q_3 = 3,050$ , IQR = 2,750 and  
 $\sigma = 1,458.54$

9) Cost of Electricity, per kWh



Mode = 9, Median = 9, Mean = 9.47,  
 $Q_1 = 8$ ,  $Q_3 = 11$ , IQR = 3 and  
 $\sigma = 1.63$

10) European Spacecraft Launches



Mode = 2 and 12, Median = 6,  
 Mean = 7.6,  $Q_1 = 3$ ,  $Q_3 = 12$ ,  
 IQR = 9 and  $\sigma = 4.63$