

Center and Spread of Data

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

- 1) Shoe Size
- 6.5 7 7.5 8 8 8 9
- 10 10.5

- 2) Hits in a Round of Hacky Sack
- 2 3 3 3 4 4 6 7
- 12 18 19

- 3) Academy Awards

| Movie | # Awards |
|----------------------------|----------|
| The Greatest Show on Earth | 2 |
| Gentleman's Agreement | 3 |
| The Great Ziegfeld | 3 |
| The King's Speech | 4 |

| Movie | # Awards |
|------------------------|----------|
| No Country for Old Men | 4 |
| Unforgiven | 4 |
| It Happened One Night | 5 |
| Forrest Gump | 6 |

| Movie | # Awards |
|--------------------|----------|
| Mrs. Miniver | 6 |
| Lawrence of Arabia | 7 |
| On the Waterfront | 8 |

- 4) Average Time to Maturity

| Plant | Days |
|----------|------|
| Bok Choi | 45 |
| Okra | 55 |

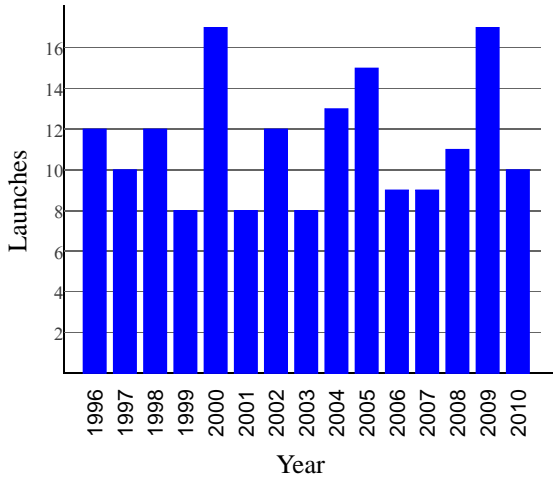
| Plant | Days |
|-------------|------|
| Swiss Chard | 60 |
| Bell Pepper | 75 |

| Plant | Days |
|-----------------------|------|
| Sugar Baby Watermelon | 75 |
| Cantaloupe | 80 |

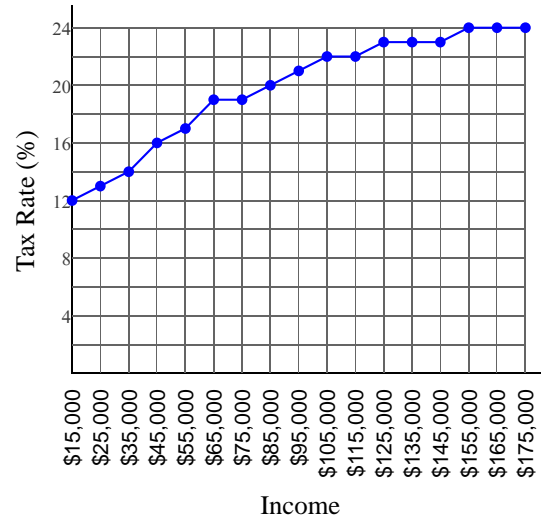
| Plant | Days |
|------------------|------|
| Honeydew | 80 |
| Beefsteak Tomato | 80 |

| Plant | Days |
|-----------|------|
| Rutabaga | 90 |
| Tomatillo | 100 |

5) European Spacecraft Launches



6) Federal Income Tax



7) Goals in a Hockey Game

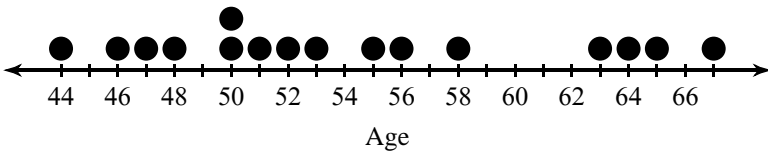
| Goals | Frequency |
|-------|-----------|
| 2 | 1 |
| 4 | 1 |
| 5 | 4 |
| 7 | 4 |
| 8 | 2 |
| 9 | 3 |

8) Mountain Heights (ft)

| Stem | Leaf |
|------|---------------------|
| 23 | 6 7 8 8 9 |
| 24 | 2 2 2 2 3 4 6 7 8 8 |
| 25 | |
| 26 | 3 7 |

Key: 24|2 = 24,200

9) US Senators When Assuming Office



Center and Spread of Data

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

- 1) Shoe Size
 6.5 7 7.5 8 8 8 9
 10 10.5

Mode = 8, Median = 8, Mean = 8.28,
 Range = 4, $Q_1 = 7.25$, $Q_3 = 9.5$,
 IQR = 2.25 and MAD = 1.04

- 2) Hits in a Round of Hacky Sack
 2 3 3 3 4 4 6 7
 12 18 19

Mode = 3, Median = 4, Mean = 7.36,
 Range = 17, $Q_1 = 3$, $Q_3 = 12$, IQR = 9
 and MAD = 4.89

- 3) Academy Awards

| Movie | # Awards |
|----------------------------|----------|
| The Greatest Show on Earth | 2 |
| Gentleman's Agreement | 3 |
| The Great Ziegfeld | 3 |
| The King's Speech | 4 |

| Movie | # Awards |
|------------------------|----------|
| No Country for Old Men | 4 |
| Unforgiven | 4 |
| It Happened One Night | 5 |
| Forrest Gump | 6 |

| Movie | # Awards |
|--------------------|----------|
| Mrs. Miniver | 6 |
| Lawrence of Arabia | 7 |
| On the Waterfront | 8 |

Mode = 4, Median = 4, Mean = 4.73, Range = 6, $Q_1 = 3$, $Q_3 = 6$, IQR = 3 and MAD = 1.52

- 4) Average Time to Maturity

| Plant | Days |
|----------|------|
| Bok Choi | 45 |
| Okra | 55 |

| Plant | Days |
|-------------|------|
| Swiss Chard | 60 |
| Bell Pepper | 75 |

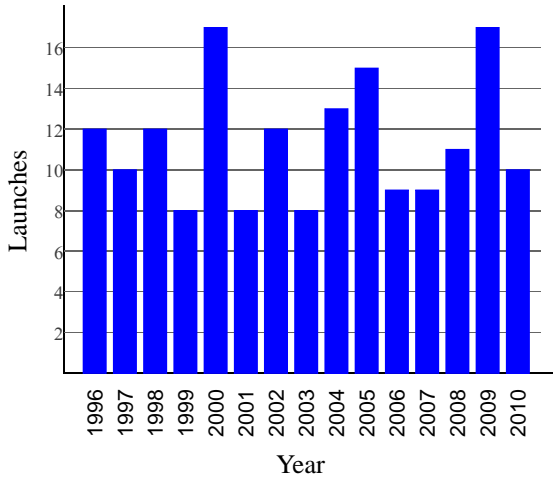
| Plant | Days |
|-----------------------|------|
| Sugar Baby Watermelon | 75 |
| Cantaloupe | 80 |

| Plant | Days |
|------------------|------|
| Honeydew | 80 |
| Beefsteak Tomato | 80 |

| Plant | Days |
|-----------|------|
| Rutabaga | 90 |
| Tomatillo | 100 |

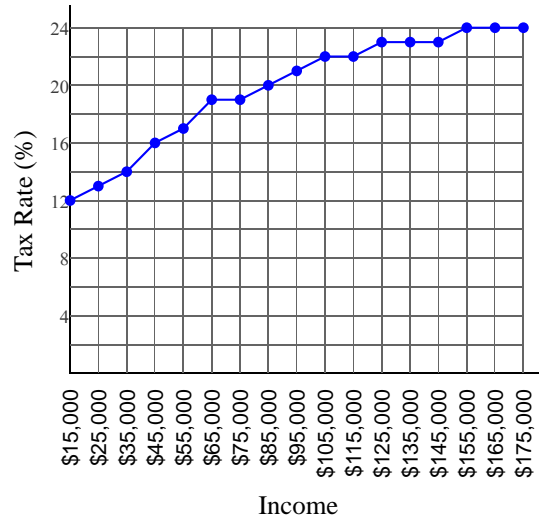
Mode = 80, Median = 77.5, Mean = 74, Range = 55, $Q_1 = 60$, $Q_3 = 80$, IQR = 20 and MAD = 12.4

5) European Spacecraft Launches



Mode = 8 and 12, Median = 11,
 Mean = 11.4, Range = 9, $Q_1 = 9$, $Q_3 = 13$,
 IQR = 4 and MAD = 2.43

6) Federal Income Tax



Mode = 23 and 24, Median = 21,
 Mean = 19.76, Range = 12, $Q_1 = 16.5$,
 $Q_3 = 23$, IQR = 6.5 and MAD = 3.34

7) Goals in a Hockey Game

| Goals | Frequency |
|-------|-----------|
| 2 | 1 |
| 4 | 1 |
| 5 | 4 |
| 7 | 4 |
| 8 | 2 |
| 9 | 3 |

Mode = 5 and 7, Median = 7,
 Mean = 6.47, Range = 7, $Q_1 = 5$,
 $Q_3 = 8$, IQR = 3 and MAD = 1.71

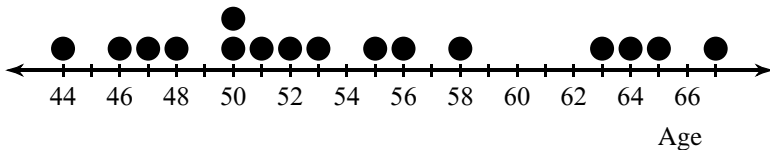
8) Mountain Heights (ft)

| Stem | Leaf |
|------|---------------------|
| 23 | 6 7 8 8 9 |
| 24 | 2 2 2 2 3 4 6 7 8 8 |
| 25 | |
| 26 | 3 7 |

Key: 24|2 = 24,200

Mode = 24,200,
 Median = 24,200,
 Mean = 24,482.35,
 Range = 3,100, $Q_1 = 23,850$,
 $Q_3 = 24,750$, IQR = 900 and
 MAD = 588.93

9) US Senators When Assuming Office



Mode = 50, Median = 52.5, Mean = 54.31, Range = 23,
 $Q_1 = 49$, $Q_3 = 60.5$, IQR = 11.5 and MAD = 5.98