

July 22, 2015

14.2 3, 7, 9, 13, 17, 19, 21, 29, 32, 41, 43, 44, 49, 50

Jul 22-11:08 AM

Test Scores

$x = 5, 67, 72, 73, 85, 100$

$\bar{x}_1 = \frac{402}{6} = 67$

$\bar{x}_2 = 74.25$

* The effect of **Outliers** on the mean. \leftarrow High Impact

$\bar{x}_2 = \frac{67 + 72 + 73 + 85}{4}$

$= \frac{297}{4}$

≈ 74.25

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$x = 6\%, 6.5\%, 7.8\%, 12.2\%, 23.8\%$? outlier!

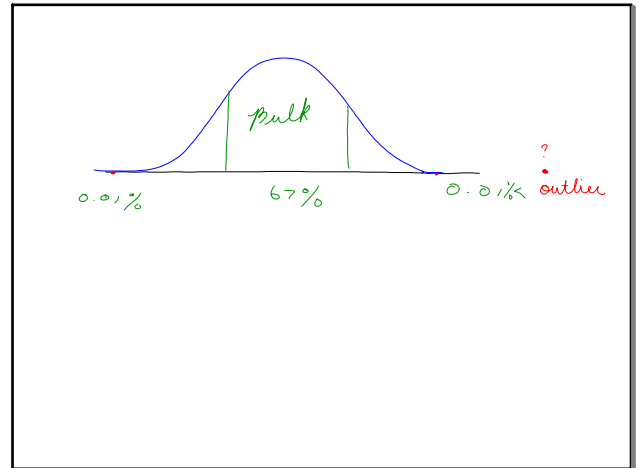
$\bar{x} = \frac{6 + 6.5 + 7.8 + 12.2 + 23.8}{5}$

$= \frac{56.3}{5}$

$= 11.26\%$

$\bar{x}_2 = \frac{20.3}{3} = 6.7\bar{6} \approx 6.8\%$

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Jul 22-11:32 AM

| Temp (°F) | Freq | Product $x \cdot f$ |
|---------------|---------------|---------------------------|
| 52 | 4 | 208 |
| 53 | 6 | 318 |
| 54 | 3 | 162 |
| 55 | 8 | 440 |
| 56 | 4 | 224 |
| 57 | 5 | 285 |
| $n = 30$ days | $\sum f = 30$ | $\sum (x \cdot f) = 1637$ |

$\bar{x} = \frac{1637}{30} = 54.6$

$\frac{\sum (x \cdot f)}{\sum f} \rightarrow$ Distribution Mean

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Median: Describes the middle of the data

* Less impacted by outliers

Median of President's Ages

42 43 46 47 51 51 52 53 54 55 57

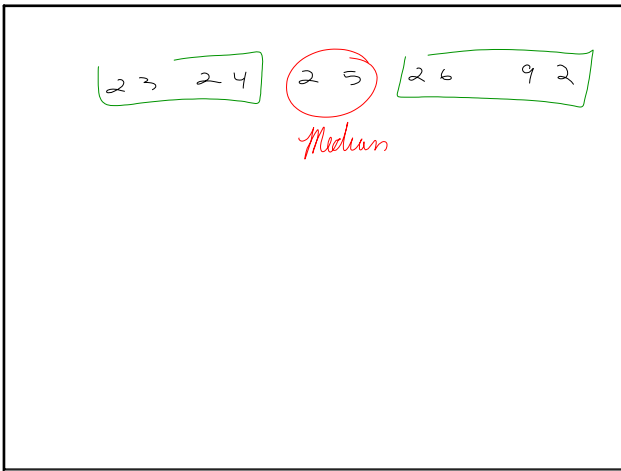
56 56 60 61 61 64 69

Finding Median

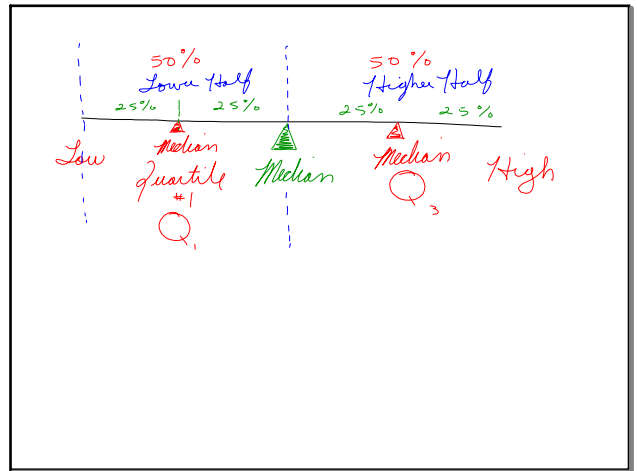
- Rank in ascending order Low to high
- Odd number of Data points Count to the middle
- Even number of Data Points, find the two middle values & calculate their mean

$\frac{24 + 25}{2} = \frac{49}{2} = 24.5 \rightarrow$ Median

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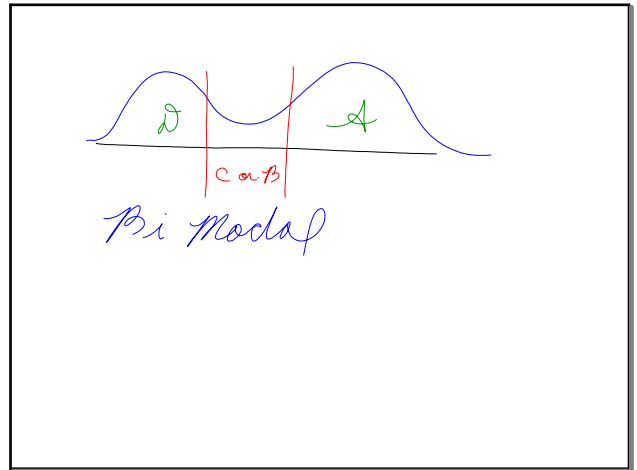
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Jul 22-12:03 PM

Mode: the Data value(s) that occurs more frequently.
 2, 3, 4, 5, 6, (7, 7), 8, 9,
 Mode: 7

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Jul 22-12:10 PM

Pres. Ages
 $\bar{x} = 51.2$
 Median: 54
 Mode: 51

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