Measures of Central Tendency 11.2

Overview of problems

Example Set: A

Find the mean, median, mode and range for each data set- show all work:

1. $3, 7, 9, 2, 3$
2. $5, 1, 10, 1, 3, 2, 7$
3. $-6, 4, -2, 0, 1, 8$
4. $\frac{1}{2}, \frac{2}{3}, \frac{1}{5}$
5. $.3, -.09, 1.5, -2, .3$

Example Set: B

Find the mean, median, mode and range for each data set (assume all x values are positive integers) - show all work:

1. $x,\ x,\ x+1,\ x+2$
2. $3x,\ 2x-1,\ x,\ 5x+1$
3. $x,\ x-1,\ x-2,\ x-1,\ x-1$
4. $x^2,\ x,\ x-5,\ 3x^2$

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Example Set: C

Find the values of the data set given the information- show all work:

1. $Mean = 30$ $\quad x,\ x+1,\ x+8$

2. $Range = 101$ $\quad 2x,\ x,\ 5x+9$

3. $Mean = 5$ $\quad x,\ 2x,\ 3x,\ 4x$

4. A parking lot is full with 30 cars parked. The average cost of the cars is $20,000. What conclusions can you make about the value of the other cars in the lot?

Example Set: A - ***ANSWER KEY***

Find the mean, median, mode and range for each data set- show all work:

1. $3, 7, 9, 2, 3$

   $mean: 4.8 \quad median: 3 \quad mode: 3 \quad range: 7$

2. $5, 1, 10, 1, 3, 2, 7$

   $mean: 4.14 \quad median: 3 \quad mode: 1 \quad range: 9$

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3. $-6, 4, -2, 0, 1, 8$

   $mean: .83 \quad median: .5 \quad mode: none \quad range: 14$

4. $\frac{1}{2}, \frac{2}{3}, \frac{1}{5}$

   $mean: \frac{41}{90} \quad median: \frac{1}{2} \quad mode: none \quad range: \frac{7}{15}$

5. $.3, -.09, 1.5, -2, .3$

   $mean: .362 \quad median: .3 \quad mode: .3 \quad range: 1.7$

Example Set: B - ***ANSWER KEY***

Find the mean, median, mode and range for each data set (assume all x values are positive integers) - show all work:

1. $x,\ x,\ x+1,\ x+2$

   $mean: \frac{4x+3}{4} \quad median: \frac{2x+1}{2} \quad mode: x \quad range: 2$

2. $3x,\ 2x-1,\ x,\ 5x+1$

   $mean: \frac{11x}{4} \quad median: \frac{5x-1}{2} \quad mode: none \quad range: 4x+1$

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3. $x,\ x-1,\ x-2,\ x-1,\ x-1$

   $mean: x-1 \quad median: x-1 \quad mode: x-1 \quad range:\ 2$

4. $x^2,\ x,\ x-5,\ 3x^2$

   $mean: \dfrac{4x^2+2x-5}{4} \quad median: \dfrac{x+x^2}{2} \quad mode: none \quad range:\ 3x^2-x+5$

Example Set: C - ***ANSWER KEY***

Find the values of the data set given the information- show all work:

1. $Mean = 30$ $\qquad x,\ x+1,\ x+8$

   27, 28, 35

2. $Range = 101$ $\qquad 2x,\ x,\ 5x+9$

   23, 46, 124

3. $Mean = 5$ $\qquad x,\ 2x,\ 3x,\ 4x$

   2, 4, 6, 8

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4. A parking lot is full with 30 cars parked. The average cost of the cars is $20,000. What conclusions can you make about the value of the other cars in the lot?

The information is too little to draw any meaningful conclusions about the value of the other cars in the parking lot; see video solution for more details.