Math 153 - Quiz 3

February 18, 2016

Name __key__

Score _____

Show all work to receive full credit. Supply explanations when necessary.

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1. (1 point) Fill in the blank with an appropriate word or phrase: The standard deviation is a measure of the ___SPREAD___ of a data set.

   OR VARIATION

2. (1 point) What must be true of a data set if its standard deviation is zero?

   ALL THE DATA VALUES MUST BE THE SAME.

3. (2 points) Compute the sample standard deviation: $\{1, 1, 2, 4, 5, 6, 6, 7\}$

   CALCULATOR SAYS

   $S \approx 2.39$

4. (6 points) Listed below are amounts spent by candidates in running campaigns for local county board seats.

   $45,263 $39,875 $29,500 $53,276 $79,034 $55,611

   Based on these numbers, would it be unusual for a candidate to spend $80,000? What about $15,000?

   FROM CALCULATOR,

   $\bar{X} = 50426.50$

   $S \approx 16907.41$

   $\bar{X} - 2s \approx 16611.68$ ← LESS THAN THIS IS UNUSUAL

   $\bar{X} + 2s \approx 84241.32$ ← GREATER THAN THIS IS UNUSUAL

   $80,000 IS NOT UNUSUAL,

   BUT $15,000 IS UNUSUAL.