

Math 153 - Quiz 6

September 27, 2018

Name key

Score _____

Show all work to receive full credit. Supply explanations when necessary. This quiz is worth 5 points. YOU MUST WORK INDIVIDUALLY.

1. (5 points) The following data are foot lengths in inches.

10.4, 9.3, 9.1, 9.3, 10.0, 9.4, 8.6, 9.8, 9.9, 9.1, 9.1

- (a) Compute the mean.

FROM THE CALCULATOR ...

$$\bar{x} = 9.45 \approx 9.45$$

- (b) Compute the range.

$$10.4 - 8.6 = 1.8$$

- (c) Compute the sample standard deviation.

FROM THE CALCULATOR ...

$$s = 0.516456...$$

$$\approx 0.52$$

- (d) Recall that we defined "unusual" values to be data values that lie 2 standard deviations beyond the mean. Determine if there are any unusual values in the set of foot lengths.

$$\bar{x} - 2s \approx 9.45 - 2(0.52)$$

$$= 8.41$$

$$\bar{x} + 2s \approx 9.45 + 2(0.52)$$

$$= 10.49$$

NO DATA LIE BELOW 8.41 OR ABOVE 10.49

- (e) Compute the coefficient of variation (CV).

⇒ NO UNUSUAL VALUES

$$CV = \frac{s}{\bar{x}} \approx \frac{0.52}{9.45} \approx 0.055 = 5.5\%$$

POP. STD. DEV
≈ 0.49