



Recall:

$$\text{Sample variance: } s^2 = \frac{n(\sum X^2) - (\sum X)^2}{n(n-1)}$$

4. (4 points) The number of yards gained in NFL playoff games by rookie quarterbacks is shown. Find the range, variance and standard deviation for the sample data set.

193 (66) 136 140

157 163 181 (226)

135 199

$$R = 226 - 66 = 160$$

ANSWERS

$$n = 10$$

$$\sum X = 1596$$

$$\sum X^2 = 272582$$

Range: 160

variance: 1984.5

std. dev.: 44.5

$$s^2 = \frac{10 \cdot 272582 - 1596^2}{10 \cdot 9} = 1984.4\bar{8} \approx 1984.5$$

$$s = \sqrt{1984.4\bar{8}} \approx 44.5$$

5. (2 points) Determine which measure of central tendency should be used in the given situation. (Circle the correct answer.)

The data are categorical.

MEAN

MEDIAN

(MODE)

MIDRANGE