

1. To determine the health care costs of its employees, a company interviewed a sample of 25 employees. Their medical expenses for the previous year were recorded. The highest expense was accidentally recorded as 10 times its actual value. However, after correcting the error, the corrected amount was still greater or equal to any other expense in the sample. Which of the following must have remained the same after the correction was made? Select all that apply. Cross out those that do *not* apply.

Mean

Median

IQR

Range (Max - Min)

Standard Deviation

2. A distribution has a mean of 45 and a median of 50. This distribution is most likely (circle one):

Skewed Left

Skewed Right

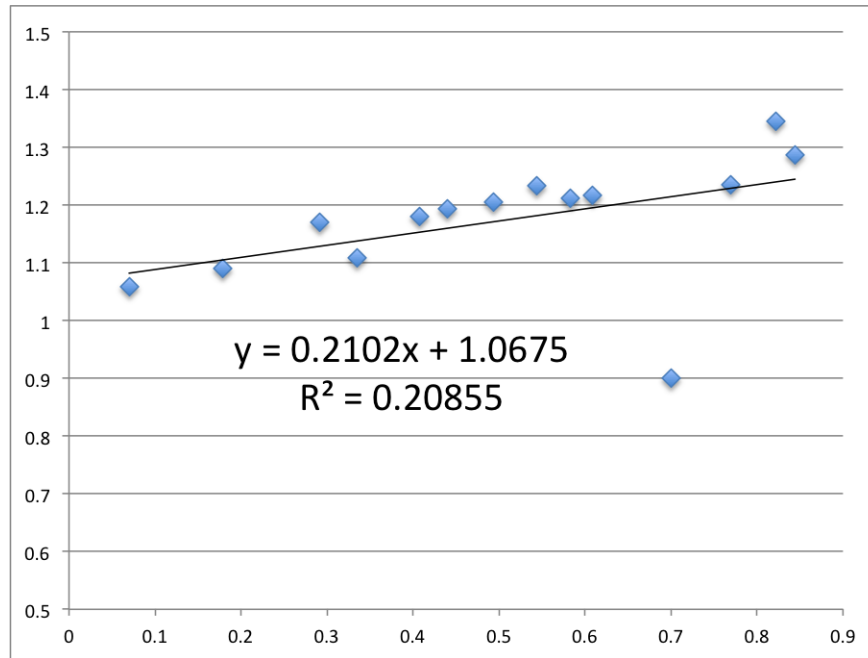
Symmetric

3. According to the American Heart Association (AHA), people over the age of 20 should have at least 40 milligrams per deciliter of High-Density Lipoprotein (HDL, or 'the good cholesterol'). Suppose HDL levels for men are normally distributed with a mean of 46 mg/dl and a standard deviation of 13.6 mg/dl.

1. What is the z -score for the AHA recommended amount of 40 mg/dl? (Round to 2 decimal places)

2. What percentage of men meet the AHA's minimum guideline for HDL?

4. The following is the output of a linear regression in Excel.



(a) What is the correlation coefficient for these two variables? (Round to 2 decimal places)

(b) What does the linear model predict will be the response to an x value of 0.7? (Round to 3 decimal places)

(c) Why do you suspect the R^2 -value is so low?