

Research paper on statistics

[Sociology](#), [Community](#)



1. What are the mean age, income, and number of years in the Senate?

i. Mean age

$$= 1637/30$$

$$= 54. 56667$$

ii. Mean income

$$= \$ 14135/30$$

$$= \$ 471. 1667$$

iii. Mean number of years in senate

$$= 424/30$$

$$= 14. 13333$$

2. What is the standard deviation of the income, and how would you interpret this?

a. Standard deviation of the income = \$ 365. 7083

(According to the formula, STDEV (range of values))

b. Significance of the standard deviation

Standard deviation is widely used in the measurement of how a given set of data is varied. In the case of the standard deviation of the salaries it shows the salaries are dispersed from the average. Since the value of the standard deviation is slightly high, it shows that the values are spread over a slightly bigger range.

3. How many senators make up the group with the least number of years in the Senate?

The least number of years in senate is 1year

A total of four (4) senators fall under this group

4. Voting preferences and party affiliation are not data that can be averaged

because they are not numeric.

a. What is this kind of data called, and how could it be grouped for statistical analysis methods?

i. This type of data is called alphabetic data

ii. This type of data can be grouped by collecting like terms together and then putting them together in a given column.

5. Is picking 30 senators randomly a good way to reach conclusions? Yes

a. Must all 100 be assessed? It is not necessary to assess all the 100 senators since the representation of the 30 senators covers both the extremes and the moderate values. Senators with the highest pay and those with the lowest pays are considered. Senators who have stayed for the longest period of time are considered while those who have stayed in the senate for just a year are also considered. The sample covers a wide range thus showing that all classes of senators are considered in the representation.

References

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2. Ghahramani, Saeed (2000). Fundamentals of Probability (2nd Edition). Prentice Hall: New Jersey. p. 438.
3. Walker, Helen (1931). Studies in the History of the Statistical Method. Baltimore, MD: Williams & Wilkins Co. pp. 24-25.