# Conceptual math

Mathematical Methods for Finance and Statistics [You can change the of [Enter [Enter School Question Thefirst three letters of my last name are " VIL".

V = 22

I = 9

L = 12

V+I+L = 22+9+12 = 43

Thus,

Yearly Income = Sum*1200 = $51600. 00

Now, it is given that,

Car payment = $236. 95

Power bill = $56. 77

Water bill = $32

Cell phone bill = $63. 42

Yearly educational bill = $7800. 00

Monthly income = Yearly income/Number of months = 51600/12 = $4300. 00

Monthly education bill = $7, 800/12 = $650

Car payment percentage = Car payment*100/Monthly income = 236. 95*100/4300 = 5. 51%

Monthly income - Monthly expenses = $4300. 00 – ($236. 95 + $56. 77 + $32 + $63. 42 + $650)

Monthly income - Monthly expenses = $4300. 00 - $1039. 14

Monthly income - Monthly expenses = $3260. 86

This remaining amount is the income available for spending on food, clothing and rent/mortgage.

Percentage income remaining = Remaining income*100/Total = 3260.

86*100/4300 = 75. 83%

Experts believe that you can afford to pay mortgage equal to around 28% of your income (Bluman p. 454, 2005).

Mortgage = 28% of income

Mortgage = 28*4300/100 = $1204

Now, it is given that affordable down payment is 25% of yearly income.

Down Payment = 25% of 51600

Down Payment = 25*51600/100

Down Payment = $12, 900

Assuming that the down payment for the home is 20% of its actual price, then

20% of Total price affordable = $12, 900

Total price affordable = 12900*100/20 = $64, 500

Question Two:

Descriptive statistics deals with simply describing the statistics obtained from a survey and keeping the results strictly applicable on the sample that has been surveyed for the data. Whereas inferential statistics deals with drawing inferences and making generalizations through the descriptive data obtained. For example, describing how many people, out of a sample of fifty, watch which news channels during primetime comes under descriptive statistics, while analyzing the group of the people selected and then generalizing the results on a certain population is classified under inferential statistics.

Random sample:

A random sample is such in which the survey targets are selected totally at

random and without bias. No criteria are defined for such a selection at all.

Stratified sample:

This involves sorting the population into like-groups. Then people are picked for survey from each group randomly. This involves grouping on basis of personal traits mostly. For example, you sort people with respect to the baseball club they support and then select people from the groups at random without any bias whatsoever.

Cluster sample:

Cluster sampling involves grouping of people through non-personality criteria, for example grouping of people with respect to geography.

Systematic sample:

Systematic sampling involves the selection of every, let’s say, 7th person or whatever number might be selected after the population is numbered.

Hypothesis:

Every 3rd Native American is a fan of baseball.

Sampling Technique used:

Random:

I would ask random Native Americans I meet anywhere if they are fans of baseball or not and record the results. After I have obtained a high number of people, then I would analyze the data obtained.

Clustered Sample:

I would divide the population into clusters based on location. I would survey people among the suburbs, downtown and countryside separately and combine my results and perform the statistical analysis.

References

Bluman, Allan. 2005. Mathematics in Our World. BurrRidge Il, McGraw Hill.