Section 1.1

1. Find the mean, median and mode of following data sets:
2. 13, 19, 14, 16, 20, 12, 11, 13

Mean is average of all numbers. So, Mean:

After arranging numbers from smallest to biggest, Median is middle value. If number of date set is even then Median is average of two middle values. So,

11, 12, 13, 13, 14, 16, 19, 20. Median

Mode is the most frequently occurring number in data set. So, Mode is 13.

1. 10, 36, 80, 22, 22, 90, 12, 22, 30

Mean:

After arranging numbers

10, 12, 22, 22, 22, 30, 36, 80, 90. Median is 22.

Mode is 22

1. Stefan got scores on 4 Math exams: 85, 96, 86, 85. What score does he need for having an average test score of 90 on his next exam?

Number of exams are 5. So, n=5.

x1=85, x2=96, x3=86, x4=85. We need to learn about x5=?

Our average is 90. Mean= Average. So, our Mean= 90.

For our formula: Mean=

x5= 98

1. In class where there are 15 students, 4 students have average of 82, 6 students have average of 74, 5 students have average of 95. What is the average test score for the entire class?

For our formula: Mean= ,

So, Approximate average test score for all students is 83.

1. Calculate Nick’s final grade with using the information board:

|  |  |
| --- | --- |
| Information Board | |
| Homework | 20% |
| Quiz | 10% |
| Lab | 15% |
| Midterm Tests | 25% |
| Final Exam | 30% |

|  |  |
| --- | --- |
| Nick’s Records | |
| Homework | 90 |
| Quiz | 88 |
| Lab | 94 |
| Midterm Tests | 92 |
| Final Exam | 80 |

For our formula: Mean= ,

So, Nick’s final grade will be 87.9

1. Calculate the mean, median and mode using a stem-and-leaf plot:

1 | 058

2 | 4

3 | 16

First number before | called steam, represents first digit of each data point. And numbers after | called leaf, represents last digit of each data point. So, our data set will be like:

10, 15, 18, 24, 31, 36

Mean is

Median is

Mode is all numbers. Because, all of them occurred one time in data set.

1. The following data was collected on survey:

* Stargazing, Hiking, Pottery, Coding, Coding, Hiking, Stargazing, Pottery, Coding, Hiking, Stargazing, Stargazing, Coding, Hiking, Coding, Stargazing, Coding, Hiking, Hiking, Coding.

Fill out the following table draw bar chart with proportions on the y-axis.

|  |  |  |  |
| --- | --- | --- | --- |
| x | Frequency | Proportion | Percent |
| Stargazing | 5 | 0.25 | 25% |
| Hiking | 6 | 0.3 | 30% |
| Pottery | 2 | 0.1 | 10% |
| Coding | 7 | 0.35 | 35% |
| Total | 20 | 1 | 100% |

1. Calculate mean, median and mode using table.

|  |  |
| --- | --- |
| Value | Frequency |
| 2 | 4 |
| 4 | 3 |
| 5 | 2 |
| 6 | 1 |
| 8 | 4 |

For our formula: Mean= ,

Middle values are 4 and 5. So, Median is

Modes are 2 and 8.