Frequency Tables – Carry out statistical processes necessary to explore the data collected

Example

A die is thrown 40 times and the number that appears uppermost recorded. The results are given below.

2, 3, 5, 6, 4, 2, 5, 1, 6, 4, 3, 5, 2, 1, 6, 3, 4, 6, 5, 2,
4, 6, 4, 3, 6, 4, 2, 1, 5, 1, 6, 4, 3, 2, 5, 1, 3, 5, 4, 2.

Construct a frequency table for this information.

Result	Tally	Frequency
1	𝍸	5
2	𝍸 ||	7
3	𝍸 |	6
4	𝍸 |||	8
5	𝍸 ||	7
6	𝍸 ||	7
TOTAL		40

Application Problems

A teacher asked her class how many children were living in their house and obtained the following results.

2, 3, 4, 1, 1, 1, 5, 3, 4, 2, 1, 2, 3, 1, 2, 1, 2, 3, 5, 3, 6, 2, 1,
2, 3, 1, 2, 2, 3, 2, 1, 4.

Use this information to answer the questions.

1. Construct a frequency table for the data.

Result	Tally	Frequency
1		
2		
3		
4		
5		
6		
TOTAL		

2. How many students were in the class?

3. What fraction of the class were from one-child households?

4. What fraction of the class were from households with three or more children?

5. A student looking at the results of the survey said that almost all children come from one or two child households. Comment on this statement.

Matches are supposed to be packed 50 per box. A class counted the matches in a large number of boxes and obtained the following results.

46, 48, 51, 47, 53, 45, 50, 48, 47, 52, 46, 50, 47, 52, 50,
47, 45, 48, 49, 51, 48, 46, 52, 53, 45, 52, 53, 47, 45, 50.

Use this information to answer the questions.

6. Construct a frequency table for this data.

Matches	Tally	Frequency
TOTAL		

7. How many boxes were counted?

8. What fraction of the boxes had less than 50 matches?

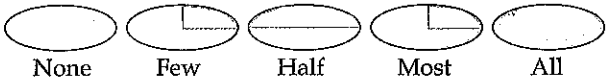
9. What proportion of boxes had fewer than 48 matches?

10. Do you think the statement about 50 matches per box is true? Justify your answer.

I found this work

Easy OK Difficult

Proportion completed



None Few Half Most All

Date:

Mean, Median, Mode and Range – Calculating mean, median, mode and range

Example

Find the mean, median, mode and range of the following data values.

4, 5, 5, 6, 6, 7, 7, 7, 8, 8, 9, 9, 10, 11, 12, 14, 17.

Mean = 8.5 (sum of the numbers divided by the number of numbers).

Median = 8 (middle number after they have been put in order.

Mode = 7 (most frequently occurring number).

Range = 13 (maximum – minimum).

Problems

Find the mean, median, mode and range of the following.

1. 4, 5, 6, 7, 8, 8, 9, 9, 9, 10, 10, 13, 15, 18, 21, 24, 30, 31, 32, 35.

2. 11, 14, 15, 17, 18, 21, 21, 23, 27, 27, 27, 28, 28, 28, 29, 29, 29, 29, 32, 40, 41, 43, 44, 45, 45.

Application Problems

3. Elaine measured the height of each of the 15 trees on her property (in metres). The heights are listed below.

   2.34, 3.41, 3.45, 3.56, 3.67, 3.78, 3.89, 4.12, 4.17, 4.56, 4.65, 4.75, 4.82, 5.23, 5.78.

   Calculate the mean, median, mode and range for the data.

4. The number of runs Alec scored during the cricket season are listed below.

   23, 13, 18, 0, 45, 0, 37, 0, 29, 18, 41, 28, 0, 18, 24, 29, 13, 31, 100, 40, 23, 39, 31, 37, 19.

   Calculate his mean, median, mode and range for the season.

Problem Solving

Hayley has averaged 20 runs in her first 5 innings for her team. What is her total to date? What must she score next time to increase her average to 25?

I found this work: Easy | OK | Difficult

Proportion completed: None | Few | Half | Most | All

Date: