

Solution:

Since the category with highest frequency is ‘Finance’, the most typical case is ‘Finance’ major.

Quartiles:

Quartiles are those values in a set of observations are arranged in order of magnitude which divides the total observation into quarters. That is a quartile divides the data into four equal parts. Let, $x_1, x_2, x_3, \dots, x_n$ be a series of n observations and they are arranged in order of magnitude,

For ungrouped data, i th quartiles $Q_i = \frac{(n+1)i}{4}$ th observation. (When n is odd).

And $Q_i = \frac{\left(\frac{n}{4} \times i\right)th observation + \left\{\left(\frac{n}{4} \times i\right) + 1\right\}th observation}{2}$ (When n is even).

For grouped data, $Q_i = L_0 + \frac{\frac{N}{4} \times i - fc}{fq} \times c$; $i = 1, 2, 3$.

Where, L_0 = Lower limit of the i th quartile class.

N = Total number of observations.

fc = Cumulative frequency of the pre- i th quartile class.

fq = Frequency of the i th quartile class.

c = Class interval of the i th quartile class .

Deciles:

The deciles of a set of observations are those values which divide the total observations into 10 equal parts. Let, $x_1, x_2, x_3, \dots, x_n$ be a series of n observations and they are arranged in order of magnitude,

For ungrouped data, i th deciles $D_i = \frac{(n+1)i}{10}$ th observation. $[i = 1, 2, \dots, 9]$ (When n is odd).

And $D_i = \frac{\left(\frac{n}{10} \times i\right)th item + \left\{\left(\frac{n}{10} \times i\right) + 1\right\}th item}{2}$ $[i = 1, 2, \dots, 9]$ (When n is even).

For grouped data, $D_i = L_0 + \frac{\frac{N}{10} \times i - fd}{fd} \times c$; $[i = 1, 2, \dots, 9]$

Where, L_0 = Lower limit of the i th decile class.

N = Total number of observations.

fc = Cumulative frequency of the pre- i th decile class.

fd = Frequency of the i th decile class.

c = Class interval of the i th decile class .

Percentiles:

The percentiles of a set of data are those values which divide the total observations into 100 equal parts. Let, $x_1, x_2, x_3, \dots, x_n$ be a series of n observations and they are arranged in order of magnitude,

For ungrouped data, i th deciles $P_i = \frac{(n+1)i}{100}$ th observation. $[i = 1, 2, \dots, 99]$ (When n is odd).

And $P_i = \frac{\left(\frac{n}{100} \times i\right)th observation + \left\{\left(\frac{n}{100} \times i\right) + 1\right\}th observation}{2}$ $[i = 1, 2, \dots, 99]$ (When n is even).

For grouped data, $P_i = L_0 + \frac{\frac{N}{100} \times i - fp}{fp} \times c$; $[i = 1, 2, \dots, 99]$