

1. There are three groups of people have average earnings \$150, \$170 & \$ 140 respectively. If the first two groups contain 17 & 12 people respectively and the combined average of earnings is \$153.25, find the number of people in the last group.
2. In a certain factory there are four working groups and they need 3, 4, 5 and 2 hours per product to make. What is the approximate average time required to make a product by those groups?
3. Let the class marks of a certain population table are 17, 22, 27, 32 & 37 and the corresponding frequencies are 9, 13, 8, 10 & 15.
 - a. Construct the original classes.
 - b. Draw the histogram.
 - c. Find the mode graphically.
4. Consider the following classes.

Class	61-65	66-70	71-75	76-80	81-85
Frequency	9	13	21	7	5

- a. Find the cumulative frequency polygon.
 - b. Estimate Q_1 , Me , D_6 & P_{85} from the cumulative frequency polygon.
5. If the mode of a certain frequency table is 65.5 and the lower limit of the modal class is 60.5 with the class size 10, find the frequency of the modal class. Here frequency difference of the modal class and pre-modal class is 7 and frequency of post-modal class is 14.
6. If the standard deviation of a frequency table is 3.6 and coefficient of standard deviation is 6.55%, find the arithmetic mean of that table.
7. Suppose the first four raw moments of a population are -3.7, 94, -547.2 & 1200 respectively.
 - a. Find the first four central moments.
 - b. Estimate the coefficient of skewness and kurtosis.
 - c. Comment about your findings.
 - d. Show your result graphically.

8. If the correlation coefficient of two variables is 0.65 and regression coefficient of y on x is 1.68. Also, $\bar{x} = 32.3$ and $\bar{y} = 45.6$.
- Find the regression coefficient of x on y .
 - Find and sketch the regression line x on y .
 - Predict the value of x when y is 52. Also, verify your result graphically.
9. If the correlation coefficient of x & y is 0.75 and the corresponding standard deviations 1.25 & 1.75. Find the regression coefficient of y on x and x on y .