

Assignment 1

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Q10 (b) : The daily wages of 80 workers in a project are given below.

Wages (in Rs)	400- 450	450- 500	500- 550	550- 600	600- 650	650- 700	700- 750
No. of work- ers	2	6	12	18	24	13	5

Use a graph paper to draw an ogive for the above distribution. (Use a scale of 2cm=Rs.50 on x-axis and 2cm=10workers on y-axis). Use your ogive to estimate:

- the median wage of the workers.
- the lower quartile wage of workers.
- the number of workers who earn more than Rs.625 daily.

Solution:

C.I	Lower limit	No. of work- ers	C.F.
400 – 450	400	2	2
450- 500	450	6	8
500- 550	500	12	20
550- 600	550	18	38
600- 650	600	24	62
650- 700	650	13	75
700- 750	700	5	80

No. of workers = 80

Median = 40th term through cumulative frequency, draw a line parallel to x-axis and then draw perpendicular line to x-axis from where it touches curve.

As per the graph:

i) Median = 604.16

ii) Lower quartile wage of workers: $\frac{1}{4} * n^{th} term$
 $= \frac{1}{4} * 80 = 20^{th} term$ in cumulative frequency

Draw a line parallel to

axis and perpendicular line to

axis from where it touches curve.

Lower quartile wage of workers = 550

iii) Number of workers who earn more than Rs.625 daily

Draw a line parallel to x-axis and perpendicular line to x-axis from where it touches curve.

No. of workers who earn more than 625 is: 36

