The following data shows the number of members in various families. Construct frequency distribution. Also find cumulative frequencies.

$$9, 11, 4, 5, 6, 8, 3, 4, 9, 12, 8, 9, 10, 6, 7, 7, 11, 4, 4, 8, 4, 3, 2, 7, 9, 10, 9, 7, 6, 9, 5, 7$$

Solution:

Frequency distribution of numbers of family members.

Numbers of members	Talley marks	Frequency	Commutative
2	I	1	1
3	III	3	1+3=4
4	𝍸	6	4+6=10
5	𝍸 I	4	10+4=14
6	III	3	14+3=17
7	𝍸 II	6	17+6=23
8	𝍸 𝍸	5	23+5=28
9	𝍸 𝍸 I	6	28+6=34
10	II	2	34+2=36
11	II	2	36+2=38
12	I	1	38+1=39
Total		39	

MathCity.org Merging man and maths by Amir Shehzad

Question No.2. The following data has been obtained after weighing 40 students of class V. Make a frequency distribution taking class interval size as 5. Also find the class boundaries and midpoints.

34,26,33,32,24,21,37,40,41,28,31,33,34,37,23,27,31,31,36,29,35,36,37,38,22,27,28,29,31,35,35,40,21,32,33,27,29,30,23.

Also make a less than cumulative frequency distribution.(Hint: Make classes 20--24,25—29).

Solution:

	Frequency Distribution	
Class limits	Talley marks	Frequency
$20-24$	𝍸	6
$25-29$	𝍸 𝍸	10

$30-34$	𝍸 𝍸 |	12
$35-39$	𝍸 ||||	9
$40-44$	|||	3
Total		40

Cumulative frequency Distribution

Class Boundaries	Frequency f	Cumulative frequency	Class Boundaries	Cumulative frequency
$14.5-19.5$	0	0	Less than 19.5	0
$19.5-24.5$	6	$0+6=6$	Less than 24.5	6
$24.5-29.5$	10	$6+10=16$	Less than 29.5	16
$29.5-34.5$	13	$16+13=29$	Less than 34.5	29
$34.5-39.5$	8	$29+8=37$	Less than 39.5	37
$40-44$	3	$37+3=40$	Less than 44.5	40

Question No.3. From the following data representing the salaries of 30 teachers of a school. Make a frequency distribution taking class interval size of $Rs.100$, 450,500,550,580,1020,1130,1220,760,690,710,750,1120,760,1240.(Hint: Make classes $450-349, 550-649, \ldots$).

Solution:

Frequency Distributive Table

Class Limits	Talley marks	Frequency
$450-549$	||	2
$550-649$	||	2
$650-749$	||||	4
$750-849$	𝍸	5
$850-949$	|||	3
$950-1049$	||||	4
$1050-1149$	𝍸	5
$1150-1249$	𝍸	5
	$Total=$	30

(a)***Find the most frequent load shedding hours.***

$6-7$

(b) ***Find the least load shedding intervals.***

$4-5$

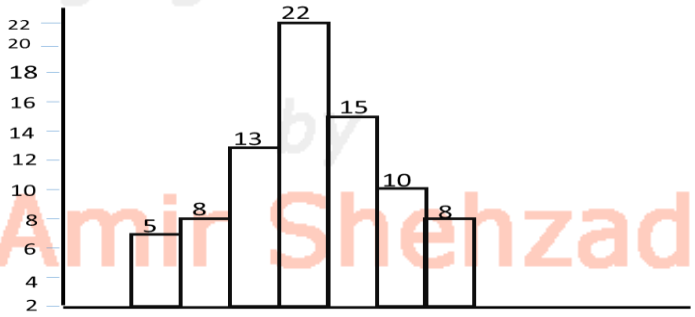
Question No..5 Construct a Histogram and frequency Polygon for the following data showing weights of a studying in kg.

Weights	Frequency / No of students
$20-24$	5
$25-29$	8
$30-34$	13
$35-39$	22
$40-44$	15
$45-49$	10
$50-54$	8

Solution:

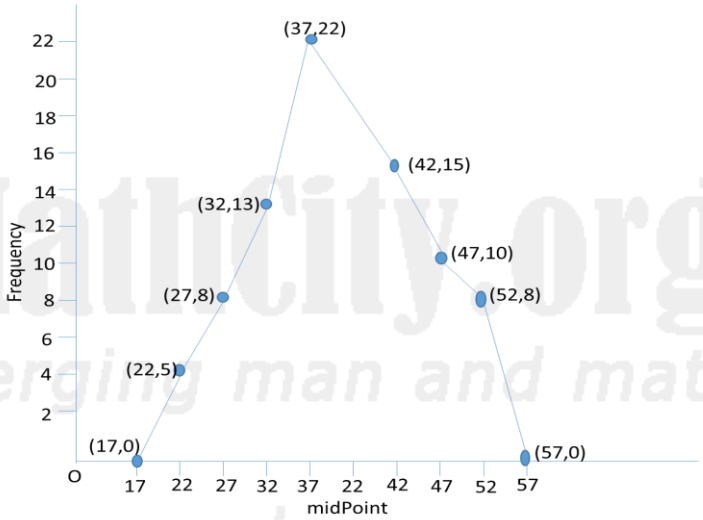
Class Boundaries	Frequency / No of students
$19.5-24.5$	5
$24.5-29.5$	8
$29.5-34.5$	13
$34.5-39.5$	22
$39.5-44.5$	15
$44.5-49.5$	10
$49.5-54.5$	8

MathCity.org
Merging man and math
by
Amir Shehzad



Class Boundaries (Weights)

Class Limits	Mid points	Frequency
$20-24$	22	5
$25-29$	27	8
$30-34$	32	13
$35-39$	37	22
$40-44$	42	15
$45-49$	47	10
$50-54$	52	8



Mathcity.org
Merging man and math
by
Amir Shehzad