



1. Which of the following are true?

- a) The difference between the true upper limit and true lower limit is called the class mark.
- b) The true lower limit of the exclusive form class interval 40 - 50 is 40.
- c) The number of times a particular observation occurs is called its frequency.
- d) Each numerical figure in a data set is called an observation.
- e) The true lower limit of the inclusive form class interval 40 - 50 is 40.

- (i) {e,c} (ii) {a,b} (iii) {a,b,c} (iv) {b,c,d} (v) {a,e,d}

If the mean of the following frequency distribution is 34 , find the value of 'x'.

2.

Class-Interval	Frequency
10 - 17	4
18 - 25	8
26 - 33	x
34 - 41	3
42 - 49	8
50 - 57	5

- (i) 1 (ii) 5 (iii) 6 (iv) 3 (v) 4

Construct a frequency distribution table from the following cumulative frequency distribution

3.

Class-Interval	Cumulative Frequency
37 - 44	14
45 - 52	25
53 - 60	37
61 - 68	47
69 - 76	62
77 - 84	71

(i)

Class-Interval	37 - 44	45 - 52	53 - 60	61 - 68	69 - 76	77 - 84
Frequency	14	11	9	10	15	9

(ii)

Class-Interval	37 - 44	45 - 52	53 - 60	61 - 68	69 - 76	77 - 84
Frequency	14	12	11	10	15	9

(iii)

Class-Interval	37 - 44	45 - 52	53 - 60	61 - 68	69 - 76	77 - 84
Frequency	14	11	12	15	15	9

(iv)

Class-Interval	37 - 44	45 - 52	53 - 60	61 - 68	69 - 76	77 - 84
Frequency	14	11	12	10	15	9

(v)

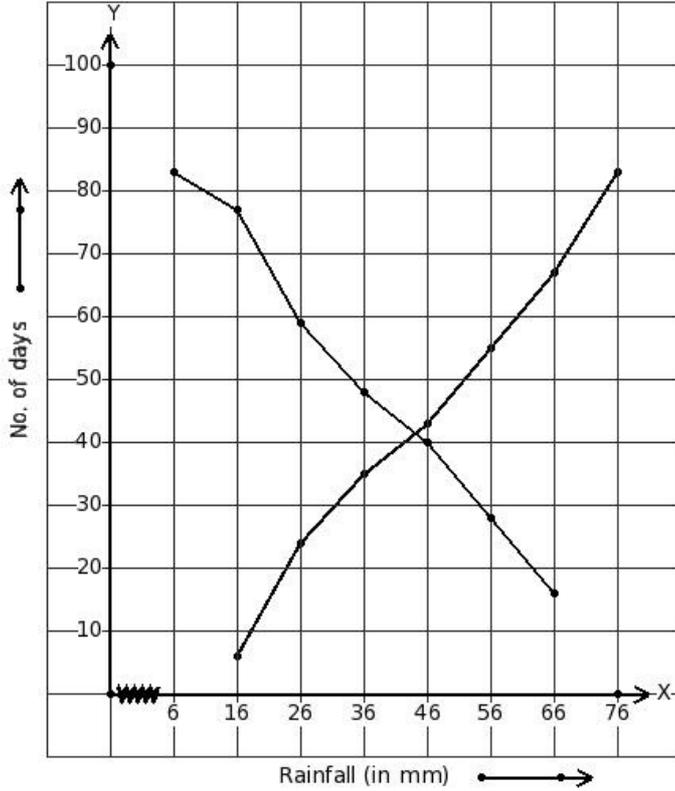
Class-Interval	37 - 44	45 - 52	53 - 60	61 - 68	69 - 76	77 - 84
Frequency	14	9	12	10	15	11

Weights of 30 students are given below. Find the median.

4. Weight (in kg)	40	45	46	49	50	54	57	58	59	60
No. of students	6	5	5	2	1	2	2	2	4	1

- (i) 48kg (ii) 44kg (iii) 46kg (iv) 47kg (v) 45kg

5. Rainfall of 83 days (in mm) are given below. Identify the frequency distribution table for the given 'median' ogive.



(i)

Rainfall (in mm)	6 - 16	16 - 26	26 - 36	36 - 46	46 - 56	56 - 66	66 - 76
No. of days	6	18	11	4	12	12	16

(ii)

Rainfall (in mm)	6 - 16	16 - 26	26 - 36	36 - 46	46 - 56	56 - 66	66 - 76
No. of days	6	18	6	8	12	12	16

(iii)

Rainfall (in mm)	6 - 16	16 - 26	26 - 36	36 - 46	46 - 56	56 - 66	66 - 76
No. of days	6	18	11	8	12	12	16

(iv)

Rainfall (in mm)	6 - 16	16 - 26	26 - 36	36 - 46	46 - 56	56 - 66	66 - 76
No. of days	6	11	18	8	12	12	16

(v)

Rainfall (in mm)	6 - 16	16 - 26	26 - 36	36 - 46	46 - 56	56 - 66	66 - 76
No. of days	6	16	11	8	12	12	18

The class mark of the class with frequency x is

6.

Class-Interval	Frequency
10 - 15	27
16 - 21	29
22 - 27	x
28 - 33	20
34 - 39	23

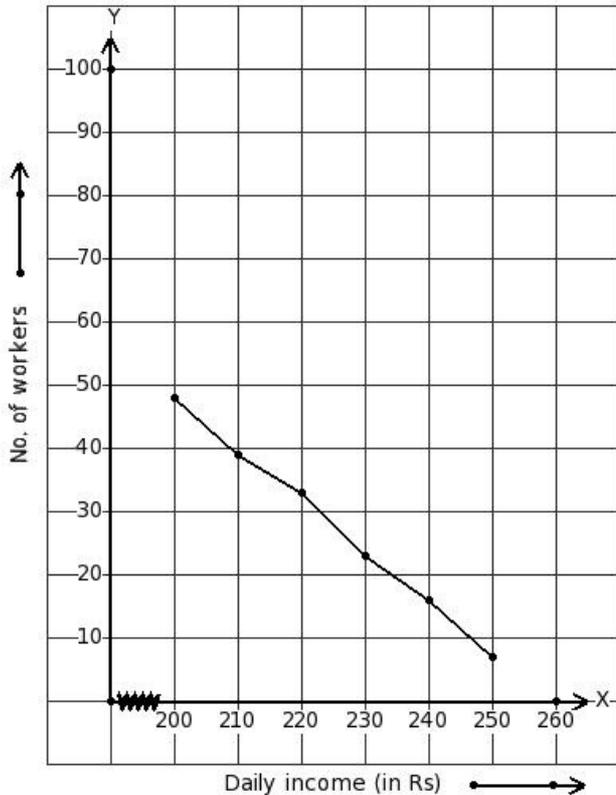
- (i) $\frac{51}{2}$ (ii) 25 (iii) $\frac{47}{2}$ (iv) $\frac{49}{2}$ (v) $\frac{97}{4}$

The following table shows the weights of 82 persons in a group. Find the median weight.

Weight (in kg)	50 - 57	57 - 64	64 - 71	71 - 78	78 - 85	85 - 92
No. of persons	19	15	5	20	12	11

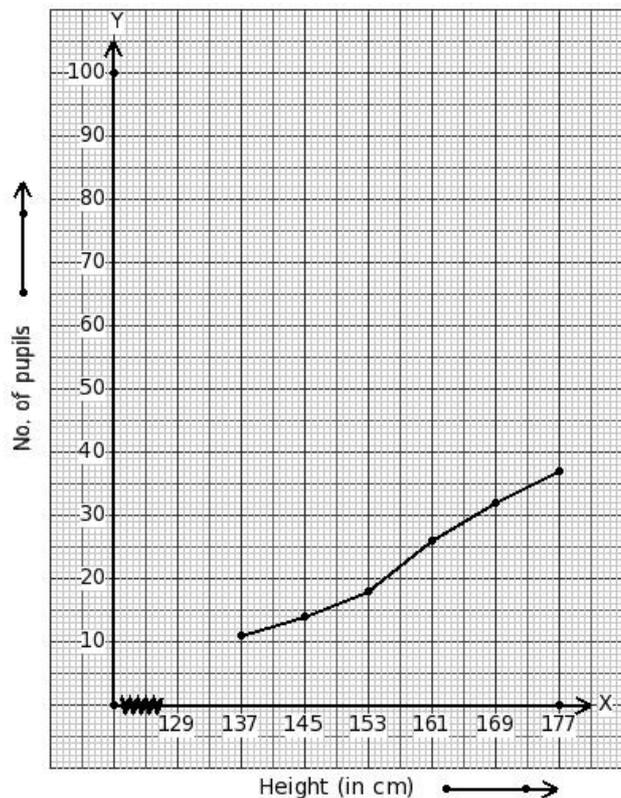
- (i) $\frac{359}{5}$ kg (ii) $\frac{737}{10}$ kg (iii) $\frac{717}{10}$ kg (iv) $\frac{719}{10}$ kg (v) $\frac{727}{10}$ kg

8. The daily income of 48 workers of a factory is given below. Identify the frequency distribution table for the given 'more than' ogive.



- (i)
- | | | | | | | |
|-----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Daily income (in Rs) | 200 - 210 | 210 - 220 | 220 - 230 | 230 - 240 | 240 - 250 | 250 - 260 |
| No. of workers | 9 | 7 | 10 | 7 | 9 | 6 |
- (ii)
- | | | | | | | |
|-----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Daily income (in Rs) | 200 - 210 | 210 - 220 | 220 - 230 | 230 - 240 | 240 - 250 | 250 - 260 |
| No. of workers | 9 | 10 | 6 | 7 | 9 | 7 |
- (iii)
- | | | | | | | |
|-----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Daily income (in Rs) | 200 - 210 | 210 - 220 | 220 - 230 | 230 - 240 | 240 - 250 | 250 - 260 |
| No. of workers | 9 | 6 | 10 | 5 | 9 | 7 |
- (iv)
- | | | | | | | |
|-----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Daily income (in Rs) | 200 - 210 | 210 - 220 | 220 - 230 | 230 - 240 | 240 - 250 | 250 - 260 |
| No. of workers | 9 | 6 | 10 | 7 | 9 | 7 |
- (v)
- | | | | | | | |
|-----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Daily income (in Rs) | 200 - 210 | 210 - 220 | 220 - 230 | 230 - 240 | 240 - 250 | 250 - 260 |
| No. of workers | 9 | 6 | 14 | 7 | 9 | 7 |

9. The heights of 37 pupils in a school are given below. Identify the frequency distribution table for the given less than ogive.



- (i)

Height (in cm)	less than 137	less than 145	less than 153	less than 161	less than 169	less than 177
No. of pupils	11	14	18	26	32	37
- (ii)

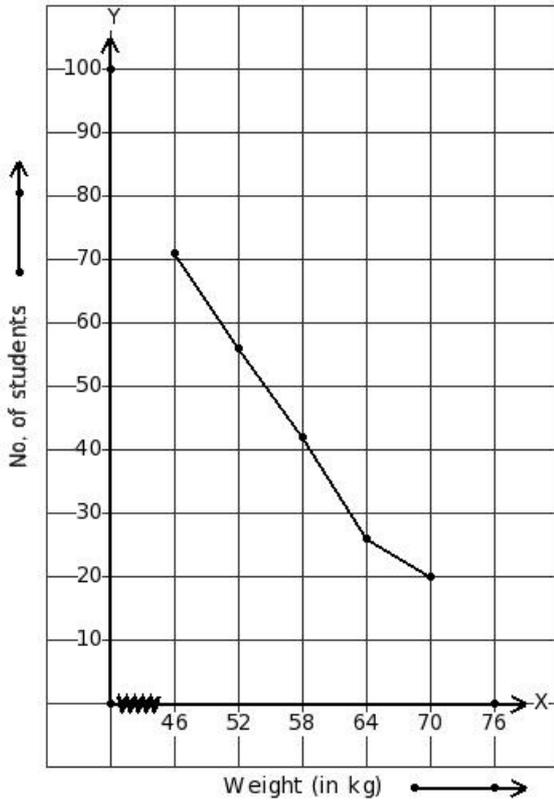
Height (in cm)	less than 137	less than 145	less than 153	less than 161	less than 169	less than 177
No. of pupils	11	14	23	31	37	42
- (iii)

Height (in cm)	less than 137	less than 145	less than 153	less than 161	less than 169	less than 177
No. of pupils	11	14	18	28	34	39
- (iv)

Height (in cm)	less than 137	less than 145	less than 153	less than 161	less than 169	less than 177
No. of pupils	11	16	20	28	34	37
- (v)

Height (in cm)	less than 137	less than 145	less than 153	less than 161	less than 169	less than 177
No. of pupils	11	15	18	26	32	37

10. Weights of 71 students (in kg) are given below. Identify the frequency distribution table for the given 'more than' ogive.



(i)

Weight (in kg)	46 - 52	52 - 58	58 - 64	64 - 70	70 - 76
No. of students	15	14	18	6	20

(ii)

Weight (in kg)	46 - 52	52 - 58	58 - 64	64 - 70	70 - 76
No. of students	15	14	16	6	20

(iii)

Weight (in kg)	46 - 52	52 - 58	58 - 64	64 - 70	70 - 76
No. of students	15	20	16	6	14

(iv)

Weight (in kg)	46 - 52	52 - 58	58 - 64	64 - 70	70 - 76
No. of students	15	10	16	6	20

(v)

Weight (in kg)	46 - 52	52 - 58	58 - 64	64 - 70	70 - 76
No. of students	15	16	14	6	20

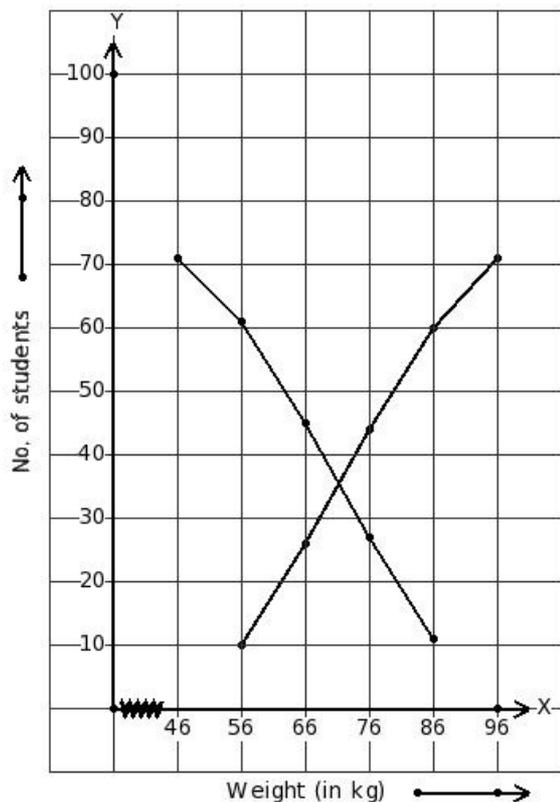
The daily wage of 48 workers of a factory is given below. Calculate the mean wage correct to 2 decimal places.

11.

Daily income (in Rs)	less than 120	less than 140	less than 160	less than 180	less than 200	less than 220	less than 240
No. of workers	7	14	20	28	33	43	48

- (i) ₹169.58 (ii) ₹184.58 (iii) ₹152.58 (iv) ₹173.58 (v) ₹161.58

12. Weights of 71 students (in kg) are given below. Identify the frequency distribution table for the given 'ogive'.



- (i)

Weight (in kg)	46 - 56	56 - 66	66 - 76	76 - 86	86 - 96
No. of students	10	19	18	16	11
- (ii)

Weight (in kg)	46 - 56	56 - 66	66 - 76	76 - 86	86 - 96
No. of students	10	16	23	16	11
- (iii)

Weight (in kg)	46 - 56	56 - 66	66 - 76	76 - 86	86 - 96
No. of students	10	18	16	16	11
- (iv)

Weight (in kg)	46 - 56	56 - 66	66 - 76	76 - 86	86 - 96
No. of students	10	11	18	16	16
- (v)

Weight (in kg)	46 - 56	56 - 66	66 - 76	76 - 86	86 - 96
No. of students	10	16	18	16	11

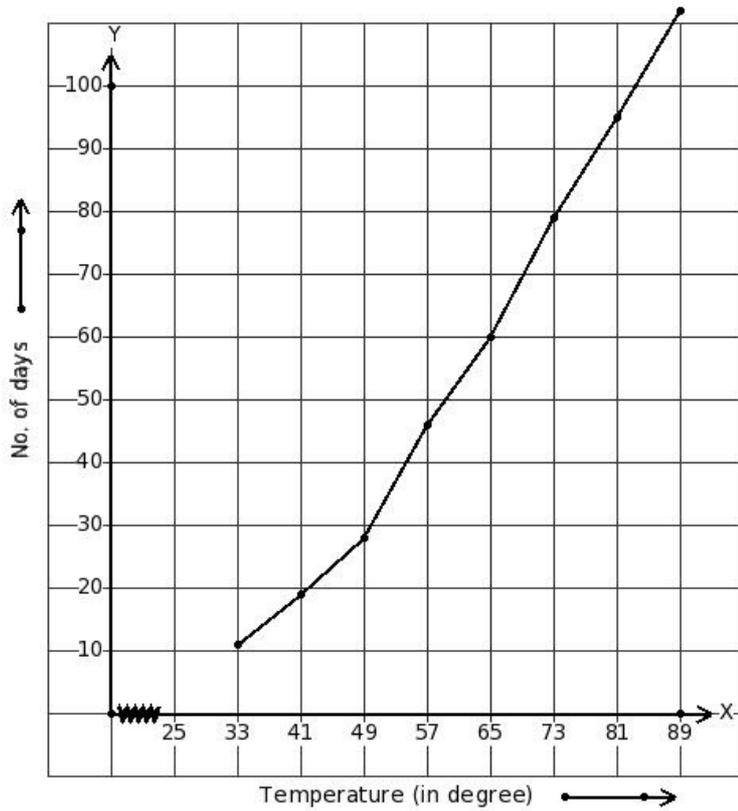
Heights of 15 plants are given below. Find the median.

13.

Height (in cm)	55	62	64	65	68	69	70	74	97
No. of plants	2	1	1	1	2	3	3	1	1

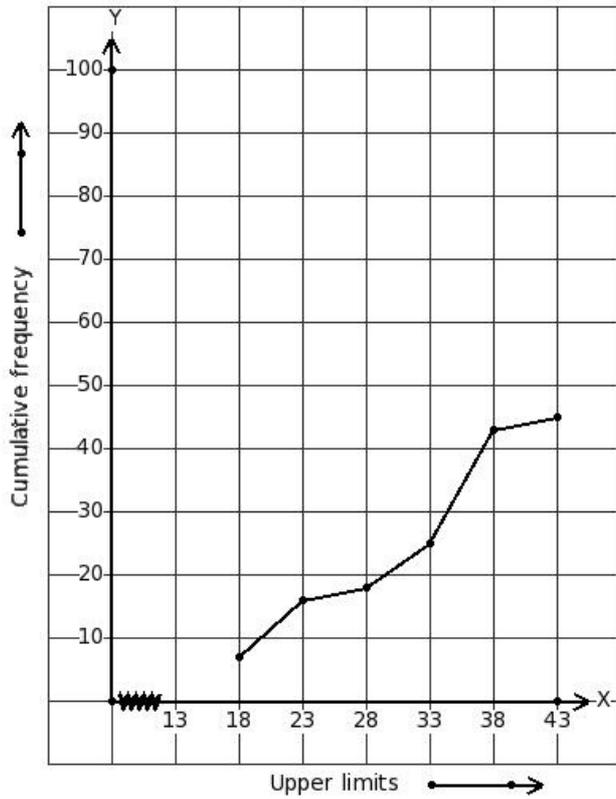
- (i) 67cm (ii) 70cm (iii) 71cm (iv) 69cm (v) 68cm

14. Temperatures of 112 days (in °C) are given below. Identify the frequency distribution table for the given 'less than' ogive.



- (i)
- | | | | | | | | | |
|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Temperature (in degree) | 25 - 33 | 33 - 41 | 41 - 49 | 49 - 57 | 57 - 65 | 65 - 73 | 73 - 81 | 81 - 89 |
| No. of days | 11 | 8 | 18 | 9 | 14 | 19 | 16 | 17 |
- (ii)
- | | | | | | | | | |
|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Temperature (in degree) | 25 - 33 | 33 - 41 | 41 - 49 | 49 - 57 | 57 - 65 | 65 - 73 | 73 - 81 | 81 - 89 |
| No. of days | 11 | 8 | 9 | 18 | 14 | 19 | 16 | 17 |
- (iii)
- | | | | | | | | | |
|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Temperature (in degree) | 25 - 33 | 33 - 41 | 41 - 49 | 49 - 57 | 57 - 65 | 65 - 73 | 73 - 81 | 81 - 89 |
| No. of days | 11 | 8 | 9 | 18 | 16 | 19 | 16 | 17 |
- (iv)
- | | | | | | | | | |
|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Temperature (in degree) | 25 - 33 | 33 - 41 | 41 - 49 | 49 - 57 | 57 - 65 | 65 - 73 | 73 - 81 | 81 - 89 |
| No. of days | 11 | 8 | 12 | 18 | 14 | 19 | 16 | 17 |
- (v)
- | | | | | | | | | |
|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Temperature (in degree) | 25 - 33 | 33 - 41 | 41 - 49 | 49 - 57 | 57 - 65 | 65 - 73 | 73 - 81 | 81 - 89 |
| No. of days | 11 | 17 | 9 | 18 | 14 | 19 | 16 | 8 |

15. Identify the frequency distribution table for the given ogive.



(i)

Class-Interval	13 - 18	18 - 23	23 - 28	28 - 33	33 - 38	38 - 43
Frequency	16	3	18	3	10	9

(ii)

Class-Interval	13 - 18	18 - 23	23 - 28	28 - 33	33 - 38	38 - 43
Frequency	7	11	8	10	10	12

(iii)

Class-Interval	13 - 18	18 - 23	23 - 28	28 - 33	33 - 38	38 - 43
Frequency	13	1	9	6	18	15

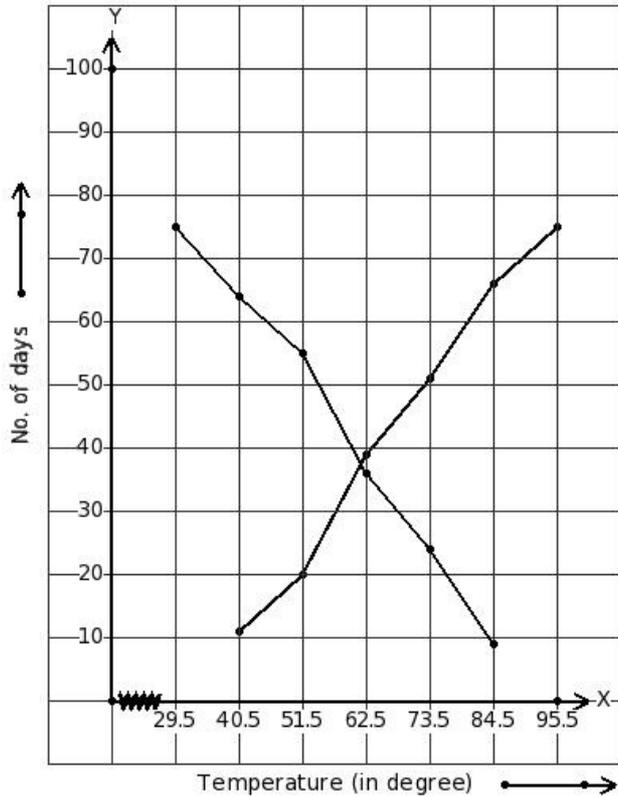
(iv)

Class-Interval	13 - 18	18 - 23	23 - 28	28 - 33	33 - 38	38 - 43
Frequency	17	3	9	17	5	5

(v)

Class-Interval	13 - 18	18 - 23	23 - 28	28 - 33	33 - 38	38 - 43
Frequency	7	9	2	7	18	2

16. Temperatures of 75 days (in °C) are given below. Identify the frequency distribution table for the given 'ogive'.



- (i)

Temperature (in degree)	30 - 40	41 - 51	52 - 62	63 - 73	74 - 84	85 - 95
No. of days	11	9	19	14	15	9
- (ii)

Temperature (in degree)	30 - 40	41 - 51	52 - 62	63 - 73	74 - 84	85 - 95
No. of days	11	9	23	12	15	9
- (iii)

Temperature (in degree)	30 - 40	41 - 51	52 - 62	63 - 73	74 - 84	85 - 95
No. of days	11	9	19	12	15	9
- (iv)

Temperature (in degree)	30 - 40	41 - 51	52 - 62	63 - 73	74 - 84	85 - 95
No. of days	11	19	9	12	15	9

Ages of 10 students are given below. Find the median.

17.

Age (in years)	10	11	12	13	14	15
No. of students	2	2	1	1	3	1

- (i) 13 years (ii) $\frac{25}{2}$ years (iii) $\frac{29}{2}$ years (iv) $\frac{27}{2}$ years

Temperatures of 10 days are given below. Find the mean.

18.

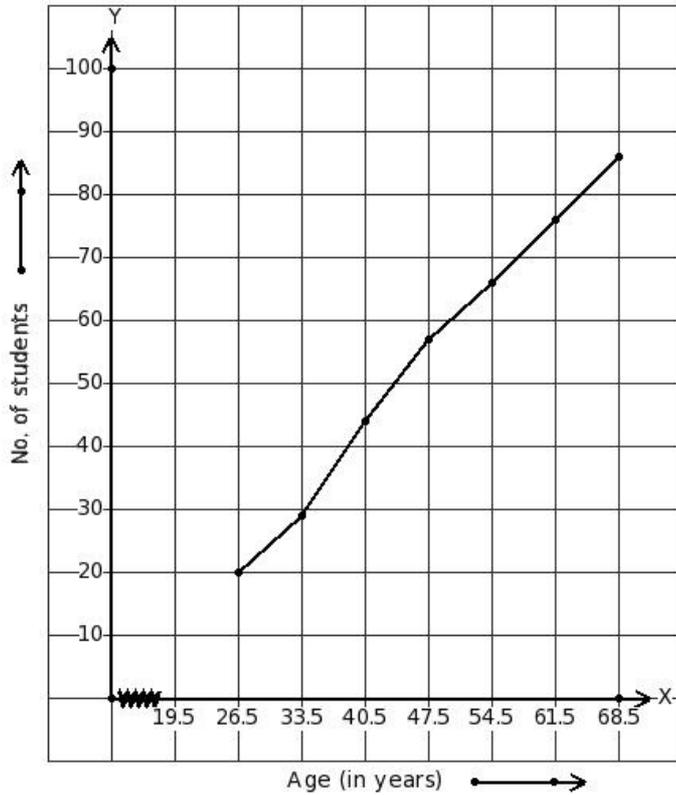
Temperature (in degree C)	25	28	29	30	32	34	35
No. of days	1	3	1	2	1	1	1

- (i) $\frac{299}{10}$ °C (ii) 30 °C (iii) $\frac{301}{10}$ °C (iv) $\frac{309}{10}$ °C (v) $\frac{319}{10}$ °C

19. Find the Mode when Median is 76 and Mean is 55.

- (i) 120 (ii) 118 (iii) 116 (iv) 117 (v) 119

20. Ages of 86 students (in years) are given below. Identify the frequency distribution table for the given 'less than' ogive.



(i)

Age (in years)	20 - 26	27 - 33	34 - 40	41 - 47	48 - 54	55 - 61	62 - 68
No. of students	20	9	15	13	9	10	10

(ii)

Age (in years)	20 - 26	27 - 33	34 - 40	41 - 47	48 - 54	55 - 61	62 - 68
No. of students	20	15	9	13	9	10	10

(iii)

Age (in years)	20 - 26	27 - 33	34 - 40	41 - 47	48 - 54	55 - 61	62 - 68
No. of students	20	9	15	18	9	10	10

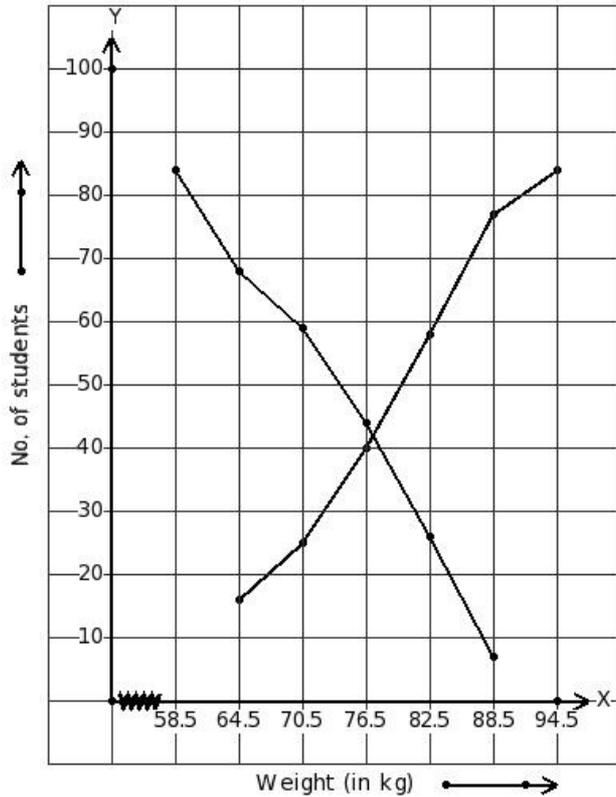
(iv)

Age (in years)	20 - 26	27 - 33	34 - 40	41 - 47	48 - 54	55 - 61	62 - 68
No. of students	20	9	10	13	9	10	10

(v)

Age (in years)	20 - 26	27 - 33	34 - 40	41 - 47	48 - 54	55 - 61	62 - 68
No. of students	20	10	15	13	9	10	9

21. Weights of 84 students (in kg) are given below. Identify the frequency distribution table for the given 'median ogive'.



- (i)

Weight (in kg)	59 - 64	65 - 70	71 - 76	77 - 82	83 - 88	89 - 94
No. of students	16	9	10	18	19	7
- (ii)

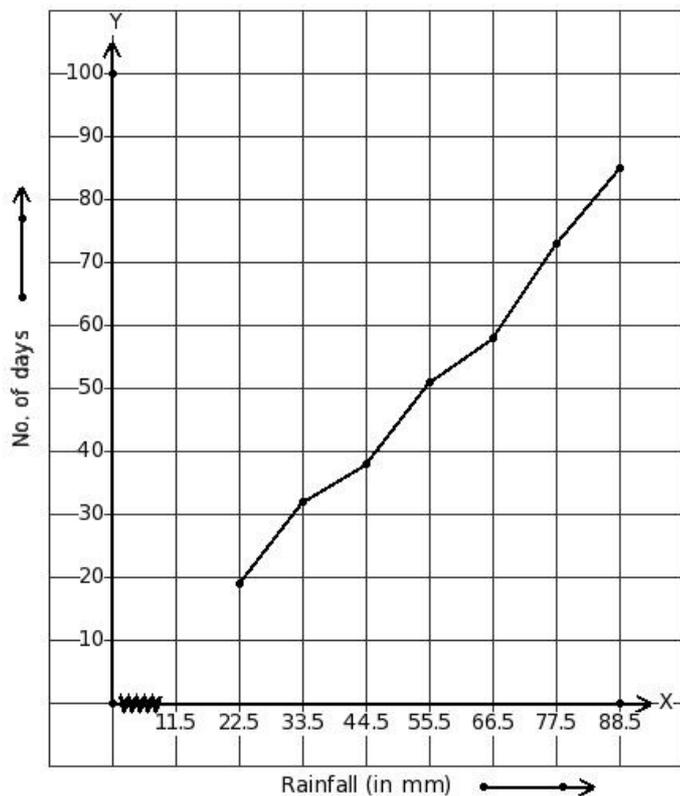
Weight (in kg)	59 - 64	65 - 70	71 - 76	77 - 82	83 - 88	89 - 94
No. of students	16	15	9	18	19	7
- (iii)

Weight (in kg)	59 - 64	65 - 70	71 - 76	77 - 82	83 - 88	89 - 94
No. of students	16	9	15	16	19	7
- (iv)

Weight (in kg)	59 - 64	65 - 70	71 - 76	77 - 82	83 - 88	89 - 94
No. of students	16	9	15	18	19	7
- (v)

Weight (in kg)	59 - 64	65 - 70	71 - 76	77 - 82	83 - 88	89 - 94
No. of students	16	7	15	18	19	9

22. Rainfall of 85 days (in mm) are given below. Identify the frequency distribution table for the given 'less than' ogive.



(i)

Rainfall (in mm)	12 - 22	23 - 33	34 - 44	45 - 55	56 - 66	67 - 77	78 - 88
No. of days	19	13	6	13	7	15	12

(ii)

Rainfall (in mm)	12 - 22	23 - 33	34 - 44	45 - 55	56 - 66	67 - 77	78 - 88
No. of days	19	13	6	18	7	15	12

(iii)

Rainfall (in mm)	12 - 22	23 - 33	34 - 44	45 - 55	56 - 66	67 - 77	78 - 88
No. of days	19	12	6	13	7	15	13

(iv)

Rainfall (in mm)	12 - 22	23 - 33	34 - 44	45 - 55	56 - 66	67 - 77	78 - 88
No. of days	19	13	2	13	7	15	12

(v)

Rainfall (in mm)	12 - 22	23 - 33	34 - 44	45 - 55	56 - 66	67 - 77	78 - 88
No. of days	19	6	13	13	7	15	12

The following cumulative frequency table represents which of the following frequency distribution

23.

Class-Interval	Cumulative Frequency
40 - 47	15
47 - 54	30
54 - 61	37
61 - 68	50
68 - 75	63
75 - 82	74

(i)

Class-Interval	40 - 47	47 - 54	54 - 61	61 - 68	68 - 75	75 - 82
Frequency	15	15	11	13	13	11

(ii)

Class-Interval	40 - 47	47 - 54	54 - 61	61 - 68	68 - 75	75 - 82
Frequency	15	15	7	11	13	11

(iii)

Class-Interval	40 - 47	47 - 54	54 - 61	61 - 68	68 - 75	75 - 82
Frequency	15	11	7	13	13	15

(iv)

Class-Interval	40 - 47	47 - 54	54 - 61	61 - 68	68 - 75	75 - 82
Frequency	15	15	7	13	13	11

(v)

Class-Interval	40 - 47	47 - 54	54 - 61	61 - 68	68 - 75	75 - 82
Frequency	15	7	15	13	13	11

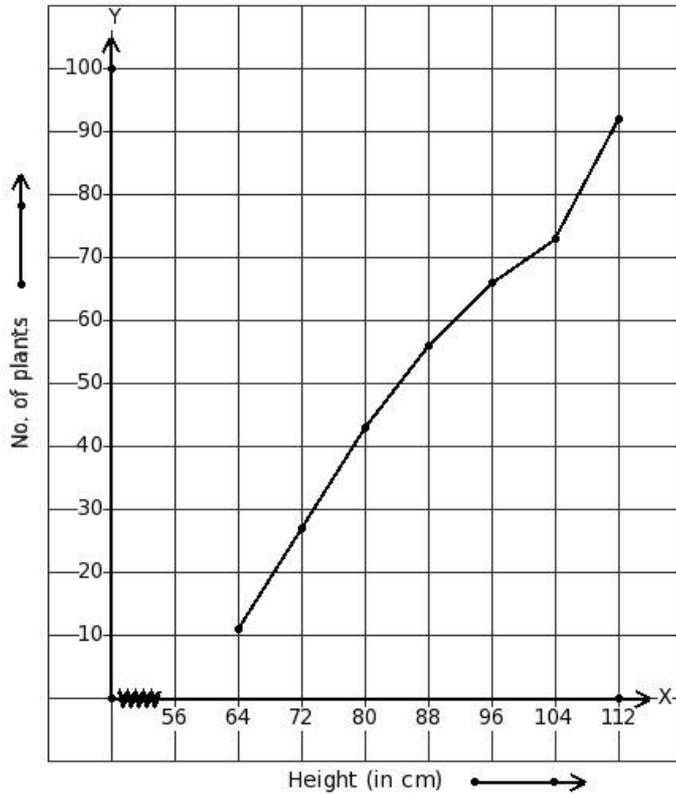
The true lower limit and true upper limit of the class with frequency x is

24.

Class-Interval	Frequency
16 - 24	12
24 - 32	26
32 - 40	5
40 - 48	25
48 - 56	x

- (i) 47.5-56.5 (ii) 48-56 (iii) 48-56.5 (iv) 48.5-55.5 (v) 47.5-56

25. Heights of 92 plants (in cm) are given below. Identify the frequency distribution table for the given 'less than' ogive.



(i)

Height (in cm)	56 - 64	64 - 72	72 - 80	80 - 88	88 - 96	96 - 104	104 - 112
No. of plants	11	19	16	13	10	7	16

(ii)

Height (in cm)	56 - 64	64 - 72	72 - 80	80 - 88	88 - 96	96 - 104	104 - 112
No. of plants	11	16	16	13	10	7	19

(iii)

Height (in cm)	56 - 64	64 - 72	72 - 80	80 - 88	88 - 96	96 - 104	104 - 112
No. of plants	11	16	16	15	10	7	19

(iv)

Height (in cm)	56 - 64	64 - 72	72 - 80	80 - 88	88 - 96	96 - 104	104 - 112
No. of plants	11	16	14	13	10	7	19

Assignment Key

1) (iv)	2) (v)	3) (iv)	4) (iii)	5) (iii)	6) (iv)
7) (iii)	8) (iv)	9) (i)	10) (ii)	11) (i)	12) (v)
13) (iv)	14) (ii)	15) (v)	16) (iii)	17) (ii)	18) (i)
19) (ii)	20) (i)	21) (iv)	22) (i)	23) (iv)	24) (ii)
25) (ii)					