



Identify the cumulative frequency of the given grouped data.

1.

<b>class interval</b>	33 - 42	42 - 51	51 - 60	60 - 69	69 - 78	78 - 87
<b>frequency</b>	14	21	22	23	22	16

(i)

class interval	Cumulative Frequency
33 - 42	14
42 - 51	35
51 - 60	53
60 - 69	76
69 - 78	98
78 - 87	114

(ii)

class interval	Cumulative Frequency
33 - 42	14
42 - 51	30
51 - 60	52
60 - 69	75
69 - 78	97
78 - 87	118

(iii)

class interval	Cumulative Frequency
33 - 42	14
42 - 51	36
51 - 60	57
60 - 69	80
69 - 78	102
78 - 87	118

(iv)

class interval	Cumulative Frequency
33 - 42	14
42 - 51	35
51 - 60	57
60 - 69	84
69 - 78	106
78 - 87	122

(v)

class interval	Cumulative Frequency
33 - 42	14
42 - 51	35
51 - 60	57
60 - 69	80
69 - 78	102
78 - 87	118

2. Heights of 13 plants (in cm) are given below. Find the mode height.

96 64 85 73 57 69 61 77 56 91 71 78 56

(i) 57cm (ii) 56cm (iii) 54cm (iv) 55cm (v) 58cm

The upper limit of the class with frequency x is

3.

Class-Interval	Frequency
33 - 38	6
38 - 43	9
43 - 48	x
48 - 53	5
53 - 58	19

(i) 50 (ii) 49 (iii) 47 (iv) 46 (v) 48

The marks obtained by 15 students in an examination are given below.

4. Represent the data in the form of a frequency distribution table in exclusive form taking class size 6.

76 76 51 74 59 43 69 57 46 45 63 47 54 40 72

(i)

Marks	40 - 46	46 - 52	52 - 58	58 - 64	64 - 70	70 - 76	76 - 82
No. of Students	3	2	2	2	1	2	3

(ii)

Marks	40 - 46	46 - 52	52 - 58	58 - 64	64 - 70	70 - 76	76 - 82
No. of Students	3	3	2	7	1	2	2

(iii)

Marks	40 - 46	46 - 52	52 - 58	58 - 64	64 - 70	70 - 76	76 - 82
No. of Students	3	3	7	2	1	2	2

(iv)

Marks	40 - 46	46 - 52	52 - 58	58 - 64	64 - 70	70 - 76	76 - 82
No. of Students	3	3	2	2	1	2	2

(v)

Marks	40 - 46	46 - 52	52 - 58	58 - 64	64 - 70	70 - 76	76 - 82
No. of Students	3	2	3	2	1	2	2

Heights of 25 plants are given below. Find the median.

5.

Height (in cm)	62	66	80	84	90	95	100
No. of plants	4	5	4	3	4	2	3

- (i) 81 cm (ii) 82 cm (iii) 80 cm (iv) 79 cm (v) 78 cm

Scores of 20 students are given below. Find the mean.

6.

Score	70	72	76	81	83	85	90
No. of students	3	1	2	4	4	5	1

- (i)  $\frac{321}{4}$  (ii)  $\frac{329}{4}$  (iii)  $\frac{325}{4}$  (iv)  $\frac{323}{4}$  (v)  $\frac{161}{2}$

7. Convert the inclusive form of the class interval 22 - 24 to exclusive form

- (i) 22-24 (ii) 21.5-25 (iii) 21-24.5 (iv) 21.5-24.5 (v) 21-25

Wages of 15 labourers are given below. Find the median.

8.

Wage (in rupees)	321	346	367	370	388	462	474	485
No. of labourers	1	2	2	5	1	1	1	2

- (i) ₹369.00 (ii) ₹372.00 (iii) ₹371.00 (iv) ₹368.00 (v) ₹370.00

9. Given the sample data, prepare the class interval table in exclusive form with 1 as min value and a class size of 7.

3 7 8 8 12 18 49 26 29 5 39 35 20 41 12 1 12 43 25 2

(i)

Class-Interval	1 - 8	8 - 15	15 - 22	22 - 29	29 - 36	36 - 43	43 - 50
Frequency	5	5	2	2	2	2	2

(ii)

Class-Interval	1 - 8	8 - 15	15 - 22	22 - 29	29 - 36	36 - 43	43 - 50
Frequency	5	2	2	2	2	2	5

(iii)

Class-Interval	1 - 8	8 - 15	15 - 22	22 - 29	29 - 36	36 - 43	43 - 50
Frequency	5	2	5	2	2	2	2

(iv)

Class-Interval	1 - 7	8 - 14	15 - 21	22 - 28	29 - 35	36 - 42	43 - 49
Frequency	5	5	2	2	2	2	2

(v)

Class-Interval	1 - 8	8 - 15	15 - 22	22 - 29	29 - 36	36 - 43	43 - 50
Frequency	5	5	5	2	2	2	2

10. Weights of 11 students (in kg) are given below. Find the median weight.

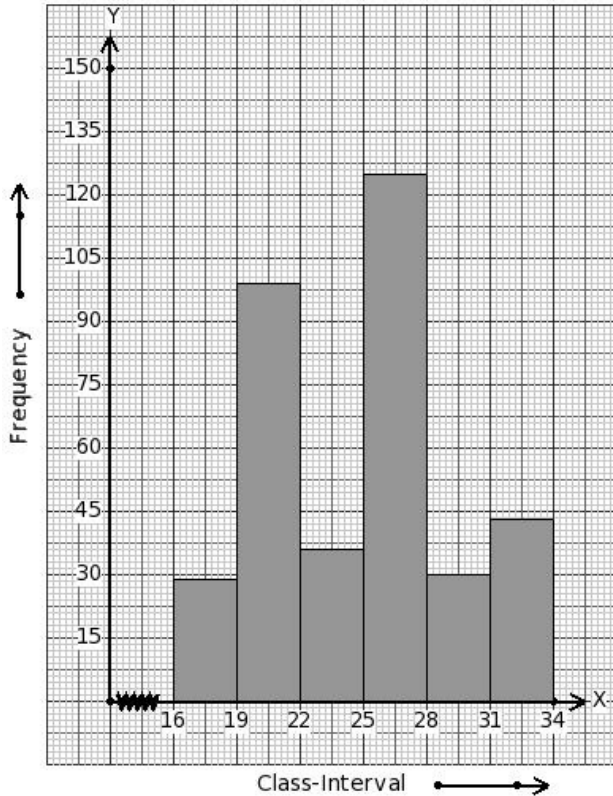
42 47 52 42 54 58 45 50 45 42 58

- (i) 46kg (ii) 47kg (iii) 48kg (iv) 45kg (v) 49kg

11. If some random sample data is arranged in a frequency distribution table in inclusive form with 3 - 8 as the first class, then the observation 19 falls in which class?

- (i) 15-20 (ii) 14.5-20.5 (iii) 14-19 (iv) 15.5-19.5 (v) 16-21

12. Identify the class interval table for the given histogram.



(i)

Class-Interval	16 - 19	19 - 22	22 - 25	25 - 28	28 - 31	31 - 34
Frequency	29	43	36	125	30	99

(ii)

Class-Interval	16 - 19	19 - 22	22 - 25	25 - 28	28 - 31	31 - 34
Frequency	29	99	38	125	30	43

(iii)

Class-Interval	16 - 19	19 - 22	22 - 25	25 - 28	28 - 31	31 - 34
Frequency	29	99	36	130	30	43

(iv)

Class-Interval	16 - 19	19 - 22	22 - 25	25 - 28	28 - 31	31 - 34
Frequency	29	36	99	125	30	43

(v)

Class-Interval	16 - 19	19 - 22	22 - 25	25 - 28	28 - 31	31 - 34
Frequency	29	99	36	125	30	43

13. The scores obtained by 6 students in a test are given below. Find the maximum score. 3 2 13 12 1 14

- (i) 1 (ii) 14 (iii)  $7\frac{1}{2}$  (iv) 13 (v) 0

14. Find the median of first 8 whole numbers.

- (i) 4 (ii)  $\frac{13}{4}$  (iii)  $\frac{7}{2}$  (iv)  $\frac{5}{2}$  (v)  $\frac{9}{2}$

15. The arithmetic mean of  $a + 2$ ,  $a$ , and  $a - 2$  is

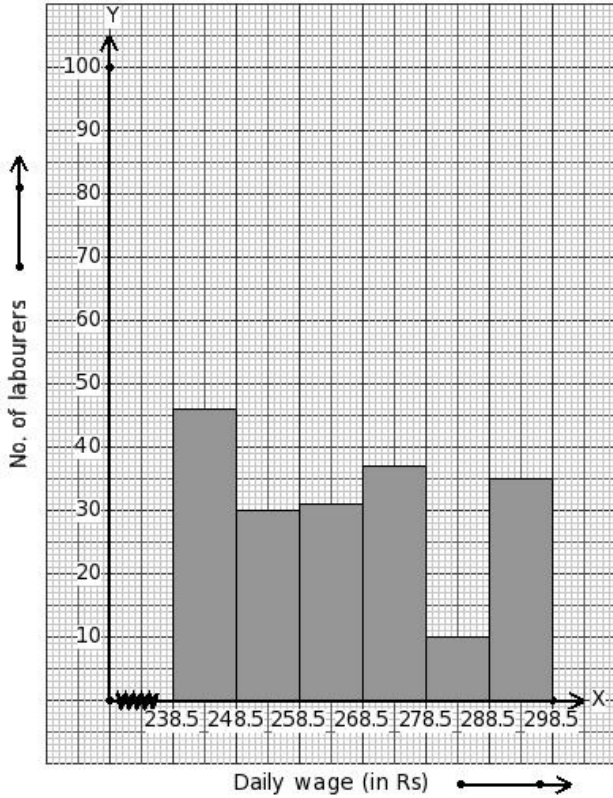
- (i)  $a$  (ii)  $3a$  (iii)  $a - 2$  (iv)  $a + 2$

16. Rainfall of 10 days (in mm) are given below. Find the median rainfall.

10 7 9 15 10 8 13 15 14 9

- (i) 9 mm (ii) 12 mm (iii) 10 mm (iv) 8 mm (v) 11 mm

17. Daily wages of 189 labourers (in ₹) are given below. Identify the class interval table for the given histogram.



(i)

<b>Daily wage (in Rs)</b>	239 - 248	249 - 258	259 - 268	269 - 278	279 - 288	289 - 298
<b>No. of labourers</b>	46	30	31	37	10	35

(ii)

<b>Daily wage (in Rs)</b>	239 - 248	249 - 258	259 - 268	269 - 278	279 - 288	289 - 298
<b>No. of labourers</b>	46	31	30	37	10	35

(iii)

<b>Daily wage (in Rs)</b>	239 - 248	249 - 258	259 - 268	269 - 278	279 - 288	289 - 298
<b>No. of labourers</b>	46	30	33	37	10	35

(iv)

<b>Daily wage (in Rs)</b>	239 - 248	249 - 258	259 - 268	269 - 278	279 - 288	289 - 298
<b>No. of labourers</b>	46	30	31	34	10	35

(v)

<b>Daily wage (in Rs)</b>	239 - 248	249 - 258	259 - 268	269 - 278	279 - 288	289 - 298
<b>No. of labourers</b>	46	35	31	37	10	30

18. Construct a frequency table in exclusive form for the following ages (in years) of 15 students, taking class size 3.  
10 20 11 18 17 15 12 18 11 13 14 19 12 16 15

(i)

Age (in years)	10 - 13	13 - 16	16 - 19	19 - 22
No. of Students	5	8	4	2

(ii)

Age (in years)	10 - 13	13 - 16	16 - 19	19 - 22
No. of Students	5	4	1	2

(iii)

Age (in years)	10 - 13	13 - 16	16 - 19	19 - 22
No. of Students	2	4	4	5

(iv)

Age (in years)	10 - 13	13 - 16	16 - 19	19 - 22
No. of Students	5	4	4	2

19. Heights of 11 students (in cm) are given below. Find the mode height.  
130 160 164 135 138 126 143 147 146 139 126

(i) 126cm (ii) 124cm (iii) 127cm (iv) 128cm (v) 125cm

20. Given the mean of 11 samples as  $11\frac{3}{11}$ , what is the mean if a sample value is decreased by 20 ?

(i)  $\frac{106}{11}$  (ii)  $\frac{86}{9}$  (iii)  $\frac{102}{11}$  (iv)  $\frac{104}{11}$  (v)  $\frac{122}{13}$

Given an even number of random samples with the middle two samples as

21.  $x + 30$  and  $x + 32$  and the median as 35 ,  
find the value of  $x$ .

(i) 2 (ii) 4 (iii) 5 (iv) 6 (v) 3

22. Which of the following are discontinuous variables?

- a) Heights of children in a class.
- b) Wages of workers in a factory.
- c) Number of members in a family.
- d) Weights of persons in a group.
- e) Number of workers in a factory.

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

Following are the daily wages (in rupees) of labourers working in a factory. Identify the cumulative frequency of the given grouped data.

23.

<b>Wages (in rupees)</b>	300 - 340	340 - 380	380 - 420	420 - 460	460 - 500	500 - 540
<b>Labourers</b>	9	14	14	4	3	15

(i)

<b>Wages (in rupees)</b>	<b>Cumulative Frequency</b>
300 - 340	9
340 - 380	24
380 - 420	38
420 - 460	42
460 - 500	45
500 - 540	59

(ii)

<b>Wages (in rupees)</b>	<b>Cumulative Frequency</b>
300 - 340	9
340 - 380	23
380 - 420	37
420 - 460	41
460 - 500	44
500 - 540	59

(iii)

<b>Wages (in rupees)</b>	<b>Cumulative Frequency</b>
300 - 340	9
340 - 380	23
380 - 420	37
420 - 460	39
460 - 500	42
500 - 540	57

(iv)

<b>Wages (in rupees)</b>	<b>Cumulative Frequency</b>
300 - 340	9
340 - 380	23
380 - 420	41
420 - 460	45
460 - 500	48
500 - 540	63

24. Temperatures of 10 days (in °C) are given below. Find the mean temperature.  
29 34 27 29 30 30 35 30 25 31

- (i) 30°C (ii) 28°C (iii) 29°C (iv) 31°C (v) 32°C

25. If the lower and upper limit of class interval are 12 and 16 respectively, then the class interval is

- (i) 12-16 (ii) 11.5-16.5 (iii) 12-16.5 (iv) 12.5-15.5 (v) 11.5-16

## Assignment Key

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