

EduSahara™ Learning Center Assignment

Grade : Class X, SSC

Chapter : Statistics

Name : Cumulative Frequency

Construct a frequency distribution table from the following cumulative frequency distribution

1.

Class-Interval	Cumulative Frequency
22 - 32	9
33 - 43	21
44 - 54	36
55 - 65	51
66 - 76	56
77 - 87	70

(i)

Class-Interval	22 - 32	33 - 43	44 - 54	55 - 65	66 - 76	77 - 87
Frequency	9	14	15	15	5	12

(ii)

Class-Interval	22 - 32	33 - 43	44 - 54	55 - 65	66 - 76	77 - 87
Frequency	9	12	15	10	5	14

(iii)

Class-Interval	22 - 32	33 - 43	44 - 54	55 - 65	66 - 76	77 - 87
Frequency	9	12	12	15	5	14

(iv)

Class-Interval	22 - 32	33 - 43	44 - 54	55 - 65	66 - 76	77 - 87
Frequency	9	12	15	15	5	14

(v)

Class-Interval	22 - 32	33 - 43	44 - 54	55 - 65	66 - 76	77 - 87
Frequency	9	15	12	15	5	14

Construct a frequency distribution table from the following cumulative frequency distribution

2.

Class-Interval	Cumulative Frequency
37 - 45	5
45 - 53	12
53 - 61	25
61 - 69	39
69 - 77	48
77 - 85	64

(i)

Class-Interval	37 - 45	45 - 53	53 - 61	61 - 69	69 - 77	77 - 85
Frequency	5	7	13	12	9	16

(ii)

Class-Interval	37 - 45	45 - 53	53 - 61	61 - 69	69 - 77	77 - 85
Frequency	5	16	13	14	9	7

(iii)

Class-Interval	37 - 45	45 - 53	53 - 61	61 - 69	69 - 77	77 - 85

Frequency	5	7	11	14	9	16
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(iv)

Class-Interval	37 - 45	45 - 53	53 - 61	61 - 69	69 - 77	77 - 85
Frequency	5	13	7	14	9	16

(v)

Class-Interval	37 - 45	45 - 53	53 - 61	61 - 69	69 - 77	77 - 85
Frequency	5	7	13	14	9	16

Following are the ages (in years) of patients getting medical treatment in a hospital. Identify the cumulative frequency of the given grouped data.

3.

Age (in years)	20 - 25	26 - 31	32 - 37	38 - 43	44 - 49	50 - 55
No. of Patients	49	62	67	62	25	74

(i)

Age (in years)	Cumulative Frequency
20 - 25	49
26 - 31	123
32 - 37	190
38 - 43	252
44 - 49	277
50 - 55	339

(ii)

Age (in years)	Cumulative Frequency
20 - 25	49
26 - 31	111
32 - 37	173
38 - 43	235
44 - 49	260
50 - 55	334

(iii)

Age (in years)	Cumulative Frequency
20 - 25	49
26 - 31	111
32 - 37	178
38 - 43	244
44 - 49	269
50 - 55	343

(iv)

Age (in years)	Cumulative Frequency
20 - 25	49
26 - 31	111
32 - 37	178
38 - 43	240
44 - 49	265
50 - 55	339

(v)

Age (in years)	Cumulative Frequency
20 - 25	49
26 - 31	116
32 - 37	178
38 - 43	240
44 - 49	265
50 - 55	339

Following are the ages (in years) of patients getting medical treatment in a hospital. Identify the cumulative frequency of the given grouped data.

4.

Age (in years)	10 - 15	15 - 20	20 - 25	25 - 30
No. of Patients	11	79	90	47

(i)

Age (in years)	Cumulative Frequency
10 - 15	11
15 - 20	101
20 - 25	180

(ii)

Age (in years)	Cumulative Frequency
10 - 15	11
15 - 20	90
20 - 25	180

25 - 30	227
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25 - 30	227
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(iii)

Age (in years)	Cumulative Frequency
10 - 15	11
15 - 20	90
20 - 25	178
25 - 30	225

(iv)

Age (in years)	Cumulative Frequency
10 - 15	11
15 - 20	88
20 - 25	178
25 - 30	225

(v)

Age (in years)	Cumulative Frequency
10 - 15	47
15 - 20	126
20 - 25	216
25 - 30	227

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

5.

Wages (in rupees)	300 - 330	331 - 361	362 - 392	393 - 423	424 - 454	455 - 485
Labourers	19	7	18	2	20	18

(i)

Wages (in rupees)	Cumulative Frequency
300 - 330	19
331 - 361	37
362 - 392	44
393 - 423	46
424 - 454	66
455 - 485	84

(ii)

Wages (in rupees)	Cumulative Frequency
300 - 330	19
331 - 361	26
362 - 392	48
393 - 423	50
424 - 454	70
455 - 485	88

(iii)

Wages (in rupees)	Cumulative Frequency
300 - 330	19
331 - 361	37
362 - 392	55
393 - 423	57
424 - 454	77
455 - 485	84

(iv)

Wages (in rupees)	Cumulative Frequency
300 - 330	19
331 - 361	26
362 - 392	44
393 - 423	51
424 - 454	71
455 - 485	89

(v)

Wages (in rupees)	Cumulative Frequency
300 - 330	19
331 - 361	26
362 - 392	44
393 - 423	46
424 - 454	66
455 - 485	84

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

Wages (in rupees)	200 - 220	220 - 240	240 - 260	260 - 280	280 - 300	300 - 320
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Labourers	17	15	1	10	8	15
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(i)

Wages (in rupees)	Cumulative Frequency
200 - 220	17
220 - 240	32
240 - 260	33
260 - 280	38
280 - 300	46
300 - 320	61

(ii)

Wages (in rupees)	Cumulative Frequency
200 - 220	17
220 - 240	32
240 - 260	35
260 - 280	45
280 - 300	53
300 - 320	68

(iii)

Wages (in rupees)	Cumulative Frequency
200 - 220	17
220 - 240	18
240 - 260	33
260 - 280	43
280 - 300	51
300 - 320	66

(iv)

Wages (in rupees)	Cumulative Frequency
200 - 220	17
220 - 240	32
240 - 260	33
260 - 280	43
280 - 300	51
300 - 320	66

Identify the cumulative frequency of the given grouped data.

7. class interval	14 - 19	20 - 25	26 - 31	32 - 37	38 - 43
frequency	9	17	15	20	13

(i)

class interval	Cumulative Frequency
14 - 19	9
20 - 25	21
26 - 31	36
32 - 37	56
38 - 43	69

(ii)

class interval	Cumulative Frequency
14 - 19	9
20 - 25	26
26 - 31	45
32 - 37	65
38 - 43	78

(iii)

class interval	Cumulative Frequency
14 - 19	9
20 - 25	26
26 - 31	41
32 - 37	61
38 - 43	74

(iv)

class interval	Cumulative Frequency
14 - 19	9
20 - 25	22
26 - 31	37
32 - 37	57
38 - 43	74

(v)

class interval	Cumulative Frequency
14 - 19	9
20 - 25	24
26 - 31	41
32 - 37	61
38 - 43	74

8. Identify the cumulative frequency of the given grouped data.

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class interval	35 - 42	42 - 49	49 - 56	56 - 63	63 - 70	70 - 77
frequency	22	7	17	9	19	16

(i)

class interval	Cumulative Frequency
35 - 42	22
42 - 49	29
49 - 56	46
56 - 63	51
63 - 70	70
70 - 77	86

(ii)

class interval	Cumulative Frequency
35 - 42	22
42 - 49	38
49 - 56	55
56 - 63	64
63 - 70	83
70 - 77	90

(iii)

class interval	Cumulative Frequency
35 - 42	22
42 - 49	29
49 - 56	46
56 - 63	55
63 - 70	74
70 - 77	90

(iv)

class interval	Cumulative Frequency
35 - 42	22
42 - 49	29
49 - 56	44
56 - 63	53
63 - 70	72
70 - 77	88

(v)

class interval	Cumulative Frequency
35 - 42	22
42 - 49	39
49 - 56	46
56 - 63	55
63 - 70	74
70 - 77	90

Find the cumulative frequency of class 48 - 58 .

9.

Class-Interval	37 - 47	48 - 58	59 - 69	70 - 80	81 - 91	92 - 102	103 - 113
Frequency	11	11	13	19	24	18	9

(i) 21 (ii) 22 (iii) 23 (iv) 25 (v) 20

Find the cumulative frequency of class 31 - 39 .

10.

Class-Interval	15 - 23	23 - 31	31 - 39	39 - 47
Frequency	21	13	21	16

(i) 57 (ii) 54 (iii) 56 (iv) 55 (v) 53

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

Class-Interval	Cumulative Frequency
19 - 24	12
24 - 29	20
29 - 34	29

34 - 39	36
39 - 44	52
44 - 49	65
49 - 54	80
54 - 59	91

(i)

Class-Interval	19 - 24	24 - 29	29 - 34	34 - 39	39 - 44	44 - 49	49 - 54	54 - 59
Frequency	12	8	11	7	16	13	15	11

(ii)

Class-Interval	19 - 24	24 - 29	29 - 34	34 - 39	39 - 44	44 - 49	49 - 54	54 - 59
Frequency	12	8	9	7	16	13	15	11

(iii)

Class-Interval	19 - 24	24 - 29	29 - 34	34 - 39	39 - 44	44 - 49	49 - 54	54 - 59
Frequency	12	8	7	9	16	13	15	11

(iv)

Class-Interval	19 - 24	24 - 29	29 - 34	34 - 39	39 - 44	44 - 49	49 - 54	54 - 59
Frequency	12	8	9	7	19	13	15	11

(v)

Class-Interval	19 - 24	24 - 29	29 - 34	34 - 39	39 - 44	44 - 49	49 - 54	54 - 59
Frequency	12	11	9	7	16	13	15	8

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

12.

Class-Interval	Cumulative Frequency
39 - 45	71
45 - 51	60
51 - 57	49
57 - 63	36
63 - 69	28
69 - 75	18
75 - 81	7

(i)

Class-Interval	39 - 45	45 - 51	51 - 57	57 - 63	63 - 69	69 - 75	75 - 81
Frequency	11	11	13	5	10	11	7

(ii)

Class-Interval	39 - 45	45 - 51	51 - 57	57 - 63	63 - 69	69 - 75	75 - 81
Frequency	11	11	17	8	10	11	7

(iii)

Class-Interval	39 - 45	45 - 51	51 - 57	57 - 63	63 - 69	69 - 75	75 - 81
Frequency	11	7	13	8	10	11	11

(iv)

Class-Interval	39 - 45	45 - 51	51 - 57	57 - 63	63 - 69	69 - 75	75 - 81
Frequency	11	11	13	8	10	11	7

(v)

Class-Interval	39 - 45	45 - 51	51 - 57	57 - 63	63 - 69	69 - 75	75 - 81
Frequency	11	13	11	8	10	11	7

13. During the medical check-up of 28 students of a class, their weights in kgs are recorded as follows.

Identify the number of students whose weight is less than 61 kg

Class-Interval	37 - 45	45 - 53	53 - 61	61 - 69
Frequency	8	9	5	6

- (i) 22 (ii) 23 (iii) 24 (iv) 21 (v) 20

During the medical check-up of 61 students of a class, their weights in kgs are recorded as follows.

Identify the number of students whose weight is more than 82 kg

14.

Class-Interval	34 - 42	42 - 50	50 - 58	58 - 66	66 - 74	74 - 82	82 - 90
Frequency	12	5	12	7	6	10	9

- (i) 12 (ii) 7 (iii) 10 (iv) 9 (v) 8

Identify the class interval table for the given less than cumulative frequency table

15.

Class-Interval	Cumulative Frequency
28 - 36	13
36 - 44	23
44 - 52	35
52 - 60	44
60 - 68	56

(i)

Class-Interval	28 - 36	36 - 44	44 - 52	52 - 60	60 - 68
Frequency	13	12	12	9	12

(ii)

Class-Interval	28 - 36	36 - 44	44 - 52	52 - 60	60 - 68
Frequency	13	12	10	9	12

(iii)

Class-Interval	28 - 36	36 - 44	44 - 52	52 - 60	60 - 68
Frequency	13	10	12	9	12

(iv)

Class-Interval	28 - 36	36 - 44	44 - 52	52 - 60	60 - 68
Frequency	13	10	8	9	12

(v)

Class-Interval	28 - 36	36 - 44	44 - 52	52 - 60	60 - 68
Frequency	13	12	12	9	10

Identify the class interval table for the given greater than cumulative frequency table

16.

Class-Interval	Cumulative Frequency
12 - 16	51
16 - 20	37
20 - 24	27
24 - 28	13
28 - 32	6

(i)

Class-Interval	12 - 16	16 - 20	20 - 24	24 - 28	28 - 32

Frequency	14	14	10	7	6
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(ii)

Class-Interval	12 - 16	16 - 20	20 - 24	24 - 28	28 - 32
Frequency	14	10	14	7	6

(iii)

Class-Interval	12 - 16	16 - 20	20 - 24	24 - 28	28 - 32
Frequency	14	6	14	7	10

(iv)

Class-Interval	12 - 16	16 - 20	20 - 24	24 - 28	28 - 32
Frequency	14	14	14	7	6

(v)

Class-Interval	12 - 16	16 - 20	20 - 24	24 - 28	28 - 32
Frequency	14	10	11	7	6

Assignment Key

- 1) (iv)
- 2) (v)
- 3) (iv)
- 4) (ii)
- 5) (v)
- 6) (iv)
- 7) (iii)
- 8) (iii)
- 9) (ii)
- 10) (iv)
- 11) (ii)
- 12) (iv)
- 13) (i)
- 14) (iv)
- 15) (iii)
- 16) (ii)