

EduSahara™ Learning Center Assignment

Grade : Class X, ICSE

Chapter : Graphical Representation of Statistical Data

Name : Cumulative Frequency

Construct a frequency distribution table from the following cumulative frequency distribution

1.

Class-Interval	Cumulative Frequency
35 - 39	7
40 - 44	16
45 - 49	27
50 - 54	41
55 - 59	54
60 - 64	68
65 - 69	81
70 - 74	90

(i)

Class-Interval	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74
Frequency	7	9	16	14	13	14	13	9

(ii)

Class-Interval	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74
Frequency	7	9	14	11	13	14	13	9

(iii)

Class-Interval	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74
Frequency	7	9	11	14	13	14	13	9

(iv)

Class-Interval	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	65 - 69	70 - 74
Frequency	7	9	11	14	16	14	13	9

Construct a frequency distribution table from the following cumulative frequency distribution

2.

Class-Interval	Cumulative Frequency
17 - 26	13
26 - 35	18
35 - 44	33
44 - 53	46
53 - 62	52
62 - 71	64
71 - 80	71

(i)

Class-Interval	17 - 26	26 - 35	35 - 44	44 - 53	53 - 62	62 - 71	71 - 80
Frequency	13	5	15	13	6	12	7

(ii)

Class-Interval	17 - 26	26 - 35	35 - 44	44 - 53	53 - 62	62 - 71	71 - 80
Frequency	13	15	5	13	6	12	7

(iii)

Class-Interval	17 - 26	26 - 35	35 - 44	44 - 53	53 - 62	62 - 71	71 - 80

Frequency	13	5	13	13	6	12	7
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(iv)

Class-Interval	17 - 26	26 - 35	35 - 44	44 - 53	53 - 62	62 - 71	71 - 80
Frequency	13	7	15	13	6	12	5

(v)

Class-Interval	17 - 26	26 - 35	35 - 44	44 - 53	53 - 62	62 - 71	71 - 80
Frequency	13	5	15	17	6	12	7

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	56 - 61	62 - 67
No. of Patients	18	46	21	60	63	15	49	32

(i)

Age (in years)	Cumulative Frequency
20 - 25	18
26 - 31	50
32 - 37	71
38 - 43	131
44 - 49	194
50 - 55	209
56 - 61	258
62 - 67	304

(ii)

Age (in years)	Cumulative Frequency
20 - 25	18
26 - 31	64
32 - 37	85
38 - 43	145
44 - 49	208
50 - 55	223
56 - 61	272
62 - 67	304

(iii)

Age (in years)	Cumulative Frequency
20 - 25	18
26 - 31	64
32 - 37	80
38 - 43	140
44 - 49	203
50 - 55	218
56 - 61	267
62 - 67	299

(iv)

Age (in years)	Cumulative Frequency
20 - 25	18
26 - 31	64
32 - 37	85
38 - 43	145
44 - 49	204
50 - 55	219
56 - 61	268
62 - 67	300

(v)

Age (in years)	Cumulative Frequency
20 - 25	18
26 - 31	64
32 - 37	124
38 - 43	145
44 - 49	208
50 - 55	223
56 - 61	272
62 - 67	304

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

Age (in years)	20 - 30	30 - 40	40 - 50	50 - 60	60 - 70
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No. of Patients	73	10	45	68	40
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(i)	Age (in years)	Cumulative Frequency	(ii)	Age (in years)	Cumulative Frequency
	20 - 30	73		20 - 30	73
	30 - 40	83		30 - 40	118
	40 - 50	128		40 - 50	128
	50 - 60	196		50 - 60	196
	60 - 70	236		60 - 70	236
(iii)	Age (in years)	Cumulative Frequency	(iv)	Age (in years)	Cumulative Frequency
	20 - 30	73		20 - 30	73
	30 - 40	85		30 - 40	83
	40 - 50	130		40 - 50	132
	50 - 60	198		50 - 60	200
	60 - 70	238		60 - 70	240
(v)	Age (in years)	Cumulative Frequency			
	20 - 30	73			
	30 - 40	113			
	40 - 50	158			
	50 - 60	226			
	60 - 70	236			

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 - 320	321 - 341	342 - 362	363 - 383	384 - 404	405 - 425
Labourers	4	7	4	17	2	3

(i)	Wages (in rupees)	Cumulative Frequency	(ii)	Wages (in rupees)	Cumulative Frequency
	300 - 320	4		300 - 320	4
	321 - 341	8		321 - 341	11
	342 - 362	15		342 - 362	15
	363 - 383	32		363 - 383	27
	384 - 404	34		384 - 404	29
	405 - 425	37		405 - 425	32
(iii)	Wages (in rupees)	Cumulative Frequency	(iv)	Wages (in rupees)	Cumulative Frequency
	300 - 320	4		300 - 320	4
	321 - 341	11		321 - 341	11
	342 - 362	15		342 - 362	17
	363 - 383	32		363 - 383	34
	384 - 404	34		384 - 404	36
	405 - 425	37		405 - 425	39
(v)	Wages (in rupees)	Cumulative Frequency			

300 - 320	4
321 - 341	7
342 - 362	11
363 - 383	28
384 - 404	30
405 - 425	37

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

6.

Wages (in rupees)	300 - 320	320 - 340	340 - 360	360 - 380	380 - 400	400 - 420
Labourers	6	12	3	10	3	4

(i)

Wages (in rupees)	Cumulative Frequency
300 - 320	6
320 - 340	18
340 - 360	23
360 - 380	33
380 - 400	36
400 - 420	40

(ii)

Wages (in rupees)	Cumulative Frequency
300 - 320	6
320 - 340	10
340 - 360	13
360 - 380	23
380 - 400	26
400 - 420	38

(iii)

Wages (in rupees)	Cumulative Frequency
300 - 320	6
320 - 340	9
340 - 360	21
360 - 380	31
380 - 400	34
400 - 420	38

(iv)

Wages (in rupees)	Cumulative Frequency
300 - 320	6
320 - 340	18
340 - 360	21
360 - 380	28
380 - 400	31
400 - 420	35

(v)

Wages (in rupees)	Cumulative Frequency
300 - 320	6
320 - 340	18
340 - 360	21
360 - 380	31
380 - 400	34
400 - 420	38

Identify the cumulative frequency of the given grouped data.

7.

class interval	21 - 28	29 - 36	37 - 44	45 - 52	53 - 60	61 - 68	69 - 76	77 - 84
frequency	22	21	8	22	19	5	11	24

(i)

class interval	Cumulative Frequency
21 - 28	22
29 - 36	43
37 - 44	65
45 - 52	73

(ii)

class interval	Cumulative Frequency
21 - 28	22
29 - 36	43
37 - 44	54
45 - 52	76

53 - 60	92
61 - 68	97
69 - 76	108
77 - 84	132

53 - 60	95
61 - 68	100
69 - 76	111
77 - 84	135

(iii)

class interval	Cumulative Frequency
21 - 28	22
29 - 36	43
37 - 44	51
45 - 52	73
53 - 60	94
61 - 68	99
69 - 76	110
77 - 84	134

(iv)

class interval	Cumulative Frequency
21 - 28	22
29 - 36	46
37 - 44	54
45 - 52	76
53 - 60	95
61 - 68	100
69 - 76	111
77 - 84	132

(v)

class interval	Cumulative Frequency
21 - 28	22
29 - 36	43
37 - 44	51
45 - 52	73
53 - 60	92
61 - 68	97
69 - 76	108
77 - 84	132

Identify the cumulative frequency of the given grouped data.

8.	class interval	41 - 47	47 - 53	53 - 59	59 - 65	65 - 71	71 - 77	77 - 83	83 - 89
	frequency	17	13	7	16	23	20	19	7

(i)

class interval	Cumulative Frequency
41 - 47	17
47 - 53	24
53 - 59	31
59 - 65	47
65 - 71	70
71 - 77	90
77 - 83	109
83 - 89	122

(ii)

class interval	Cumulative Frequency
41 - 47	17
47 - 53	30
53 - 59	37
59 - 65	53
65 - 71	71
71 - 77	91
77 - 83	110
83 - 89	117

(iii)

class interval	Cumulative Frequency
41 - 47	17
47 - 53	30
53 - 59	34
59 - 65	50

(iv)

class interval	Cumulative Frequency
41 - 47	17
47 - 53	30
53 - 59	37
59 - 65	53

65 - 71	73
71 - 77	93
77 - 83	112
83 - 89	119

65 - 71	76
71 - 77	96
77 - 83	115
83 - 89	122

(v)

class interval	Cumulative Frequency
41 - 47	17
47 - 53	30
53 - 59	46
59 - 65	53
65 - 71	76
71 - 77	96
77 - 83	115
83 - 89	122

Find the cumulative frequency of class 98 - 105 .

9.	Class-Interval	50 - 57	58 - 65	66 - 73	74 - 81	82 - 89	90 - 97	98 - 105
	Frequency	21	15	12	17	16	7	8

(i) 96 (ii) 97 (iii) 99 (iv) 95 (v) 94

Find the cumulative frequency of class 31 - 39 .

10.	Class-Interval	15 - 23	23 - 31	31 - 39	39 - 47	47 - 55	55 - 63
	Frequency	22	12	11	25	6	8

(i) 45 (ii) 44 (iii) 43 (iv) 46 (v) 47

During the medical check-up of 52 students of a class, their weights in kgs are recorded as follows.

Identify the number of students whose weight is less than 52 kg

11.	Class-Interval	32 - 42	42 - 52	52 - 62	62 - 72	72 - 82	82 - 92
	Frequency	11	7	7	7	12	8

(i) 17 (ii) 18 (iii) 19 (iv) 20 (v) 16

During the medical check-up of 44 students of a class, their weights in kgs are recorded as follows.

Identify the number of students whose weight is more than 64 kg

12.	Class-Interval	40 - 48	48 - 56	56 - 64	64 - 72	72 - 80
	Frequency	11	12	6	10	5

(i) 15 (ii) 14 (iii) 13 (iv) 16 (v) 17

Assignment Key

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