

Cumulative Frequency Table Questions1

1. A questionnaire was taken among 50 students to find out the time spent eating lunch at the school. The following table shows the results of the questionnaire.

Eating time (in minutes)	No. of students
1-5	3
6-10	7
11-15	9
16-20	15
21-25	10
26-30	6

- (a) Construct a cumulative frequency table to represent the data given above
- (b) Use the cumulative frequency table to estimate :
- (i) The number of students who eat for no more than 15 minutes
 - (ii) The number of students who eat for more than 20 minutes
 - (iii) The probability that a student chosen at random would have eaten for more than 25 minutes
2. The cumulative frequency distribution of the weights, in kilograms, for a group of baskets is shown in the table below.

Weights (Kg)	No. of baskets
51-55	4
56-60	15
61-65	30
66-70	18
71-75	8

- a) Construct a cumulative frequency table to represent the data given above
- b) Use the cumulative frequency table to find :
- (i) The number of baskets weighting no more than 60 Kg
 - (ii) The number of baskets weighting more than 65 Kg
 - (iii) The probability that a basket chosen at random weighed less than or equal to 70 Kg.

3. A man kept the following data for his garden over eight weeks.

Days	No. of flowers collected
1-7	12
8-14	17
15-21	19
22-28	25
29-35	23
36-42	13
43-49	16
50-56	15

- (a) Complete the cumulative frequency table.
(b) Use the cumulative frequency table to determine:
(i) The number of flowers collected in the first 28 days
(ii) The number of flowers collected in the last 14 days

4. The grouped frequency distribution of badges of 120 candidates in a ceremony is given below.

Class interval	Frequency
0-4	2
5-9	4
10-14	8
15-19	17
20-24	24
25-29	26
30-34	12
35-39	10
40-44	11
45-49	6

- (a) Represent the data above using a cumulative frequency table.
(b) Use the cumulative frequency table to estimate:
(i) The number of students who received more than 24 badges but less than 44 badges
(ii) The proportion of students who received more than 39 badges.

5.

Stars	No.of students
Less than 21	5
21-30	7
31-40	12
41-50	18
51-60	26
61-70	10
71-80	14
81-90	8

The group frequency table above shows the distribution of the marks of 100 students on a test .

- (a) Represent the data given using a cumulative frequency table.
- (b) Use the cumulative frequency table to determine :
 - (i) the percentage of students who got 40 stars or less
 - (ii) the proportion of students who got more than 80 stars
 - (iii) the probability that a student chosen at random got no more than 60 stars