Assignment 3

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***Abstract*—This document contains the solution for Assignment 3 (NCERT Class 9 Exercise 14.2 Q.5)**

14.2 (5) A study was conducted to find out the concentration of sulphur dioxide in the air in parts per million (ppm) of a certain city. The data obtained for 30 days is as follows:

0.03	0.08	0.08	0.09	0.04	0.17
0.16	0.05	0.02	0.06	0.18	0.20
0.11	0.08	0.12	0.13	0.22	0.07
0.08	0.01	0.10	0.06	0.09	0.18
0.11	0.07	0.05	0.07	0.01	0.04

TABLE I
RAW DATA

(i) Make a grouped frequency distribution table for this data with class intervals as $0.00 - 0.04$, $0.04 - 0.08$, and so on.

(ii) For how many days, was the concentration of sulphur dioxide more than 0.11 parts per million?

Solution:

(i) The grouped frequency distribution table is given below:

Conc. of sulphur dioxide (ppm)	Frequency
0.00-0.04	4
0.04-0.08	9
0.08-0.12	9
0.12-0.16	2
0.16-0.20	4
0.20-0.24	2
Total	30

TABLE II
GROUPED FREQUENCY DISTRIBUTION TABLE

(ii) The concentration of sulphur dioxide is more than 0.11 ppm in the class intervals $0.12 - 0.16$, $0.16 - 0.20$, $0.20 - 0.24$. Adding the frequencies corresponding to these classes we get

$$2 + 4 + 2 = 8 \tag{1}$$

Hence, 8 days the concentration of sulphur dioxide more than 0.11 parts per million.