

NCERT Maths Class X-Statistics Ex 14.1 - Question 7

Solutions by Dev Anoop (Bathinda)

Concen. of SO ₂ (inPPM)	No. of Houses f_i	Class Marks x_i	$U_i = \frac{x_i - a}{h}$	$f_i U_i$
.00 - .04	4	.02	-2	-8
.04 - .08	9	.06	-1	-9
.08 - .12	9	.10	0	0
.12 - .16	2	.14	1	2
.16 - .20	4	.18	2	8
.20 - .24	2	.22	3	6
Total	30			-1

$$\begin{aligned}
 \text{Mean} &= a + \frac{\sum f_i U_i}{\sum f_i} \times h \\
 &= .10 + \frac{-1}{30} \times .04 \\
 &= .10 - .001 \\
 &= 0.099
 \end{aligned}$$

Mean concentration of SO₂ in air
= 0.099

Method Used - Step Deviation , Here Class Marks have values difficult to multiply