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 19/Exp 01/1009  
 Chemical Engineering  
 STA 132

Solution

C.I	$f_i$	$x$	$fx$	$x - \bar{x}$	$(x - \bar{x})^2$	$f_i(x - \bar{x})^2$
1-5	0	3	0	14.83	219.93	0
6-10	7	8	56	9.83	16.63	676.41
11-15	10	13	130	4.85	23.33	233.30
16-20	2	18	36	0.17	2.03	0.06
21-25	1	23	23	5.17	26.73	26.73
26-30	5	28	140	10.17	34.3	517.15
31-35	4	33	132	15.17	230.13	920.52
	$\Sigma f_i = 29$		$\Sigma fx = 517$			$\Sigma f_i(x - \bar{x})^2 = 2374.17$

a) Mean  $\bar{x} = \frac{\Sigma fx}{\Sigma f_i} = \frac{517}{29} = 17.83$

b) S.D. =  $\sqrt{\frac{\Sigma f_i(x - \bar{x})^2}{\Sigma f_i}} = \sqrt{\frac{2374.17}{29}} = \sqrt{81.87}$

9.05

c)  $V = \frac{S.D.}{\bar{x}} \times 100$

$\frac{9.05}{17.83} \times 100$

50.76