



Exercise 14F

Question 9:

Let the assumed mean (A) = 900

Weekly wages (X_i)	No of workers (f_i)	$d_i = (x_i - A)$ $= x_i - 900$	$f_i \times d_i$
800	7	-100	-700
820	14	-80	-1120
860	19	-40	-760
900	25	0	0
920	20	20	400
980	10	80	800
1000	5	100	500
	$\Sigma f_i = 100$		-880

Let \bar{X} be the mean. Using formula,

$$\bar{X} = A + \frac{\Sigma f_i \times d_i}{\Sigma f_i}$$

$$= \left[900 + \left(\frac{-880}{100} \right) \right]$$

$$= 900 - 8.80$$

$$= 891.20$$

∴ mean weekly wages = Rs. 891.20

Question 10:

Let the assumed mean be A = 67

Height in cm (X_i)	No of plants (f_i)	$d_i = (x_i - A)$ $= (x_i - 67)$	$f_i \times d_i$
61	5	-6	-30
64	18	-3	-54
67	42	0	0
70	27	3	81
73	8	6	48
		100	$\Sigma f_i \times d_i = 45$

Let \bar{X} be the mean.

Therefore,

$$\text{Mean, } \bar{X} = A + \frac{\Sigma f_i \times d_i}{\Sigma f_i}, \text{ where A is the assumed mean}$$

$$= 67 + \frac{45}{100}$$

$$= 67 + 0.45$$

$$= 67.45$$

Therefore, mean height of the plants is 67.45 cm.

*****END*****