

QUESTION

The following table shows the number of hours worked per week by a sample of 100 employees.

Hours	Frequency
10	10
15	20
20	30
25	25
30	15

Calculate the mean and standard deviation of the number of hours worked per week.

ANSWER

The mean and standard deviation of the number of hours worked per week are calculated as follows:

Hours	Frequency	fx	fx^2
10	10	100	1000
15	20	300	4500
20	30	600	12000
25	25	625	15625
30	15	450	13500
Total	100	2075	47625

Mean = $\frac{2075}{100} = 20.75$
Standard deviation = $\sqrt{\frac{47625}{100} - (20.75)^2} = \sqrt{476.25 - 430.5625} = \sqrt{45.6875} = 6.76$