

⇒ Box plot

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Activity-4

• Step ①:- Sort them in ascending or descending order.

$$X = [1, 2, 3, 4, 5, 12, 13, 16]$$

$$Y = [1, 2, 5, 9, 12, 23, 50, 56]$$

$$A = [6, 7, 8, 9, 12, 12, 34]$$

$$B = [1, 12, 13, 16, 18, 19]$$

$$C = [3, 5, 7, 8, 12, 23, 78]$$

$$D = [6, 7, 8, 9, 23, 34, 90]$$

Step ②:- find the value of Q_2 (median) for each Column

$$X = 4.5$$

$$Y = 10.5$$

$$A = 9$$

$$B = 14.5$$

$$C = 8$$

$$D = 9$$

Step ③:- Values of Q_1 & Q_3

$$X \rightarrow Q_1 \rightarrow [1, 2, 3] \quad Q_3 \rightarrow [12, 13, 16]$$

$$Q_1 \rightarrow 2 \quad Q_3 \rightarrow 13$$

$$Y \rightarrow Q_1 \rightarrow 2 \quad Q_3 \rightarrow 50$$

$$A \rightarrow Q_1 \rightarrow 7 \quad Q_3 \rightarrow 12$$

$$B \rightarrow Q_1 \rightarrow 6.5 \quad Q_3 \rightarrow 18.5$$

$$C \rightarrow Q_1 \rightarrow 5 \quad Q_3 \rightarrow 23$$

$$D \rightarrow Q_1 \rightarrow 7 \quad Q_3 \rightarrow 34$$

Step ④:- find the values of IQR

$$X \rightarrow 11$$

$$Y \rightarrow 48$$

$$A \rightarrow 5$$

$$B \rightarrow 12$$

$$C \rightarrow 18$$

$$D \rightarrow 27$$

Step ⑤:- find the max and min values for each Column to point out outliers.

$$* Q_1 - (IQR \times 1.5)$$

$$Q_3 + (IQR \times 1.5)$$

$$X \rightarrow -14.5$$

$$X \rightarrow 29.5$$

$$Y \rightarrow -70$$

$$Y \rightarrow 122$$

$$A \rightarrow -0.5$$

$$A \rightarrow 19.5$$

$$B \rightarrow -11.5$$

$$C \rightarrow -22$$

$$D \rightarrow -33.5$$

$$B \rightarrow 36.5$$

$$C \rightarrow 50$$

$$D \rightarrow 76.5$$

step 6 :- Box plot :-

