

$$X = [2, 5, 6, 8, 1, 12, 17]$$

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

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

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

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

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

Arrange them in Median

$$X = [1, 2, 5, 6, 8, 12, 17]$$

$$Q_2 = 6$$

$$Q_1 = 2 \quad Q_3 = 12$$

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

$$Q_2 = 9$$

$$IQR = Q_3 - Q_1 = 12 - 2 = 10$$

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

$$Q_2 = 9$$

$$IQR = Q_3 - Q_1$$

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

$$Q_2 = 8$$

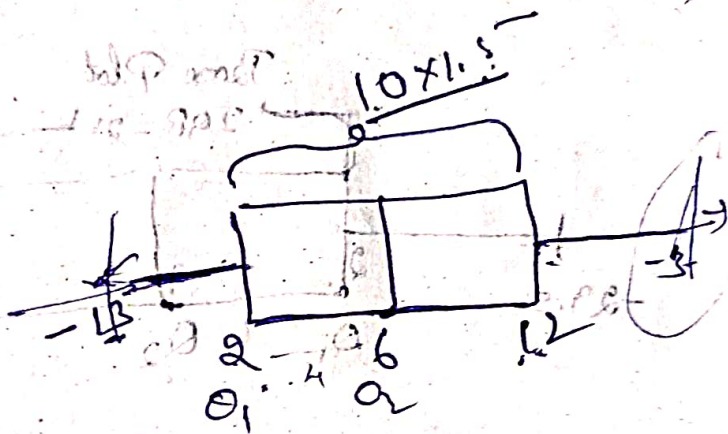
$$B = [3, 5, 7, 8, 1, 12, 13, 16, 18, 19]$$

$$Q_2 = 14.5$$

$$\frac{16+13}{2}$$

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

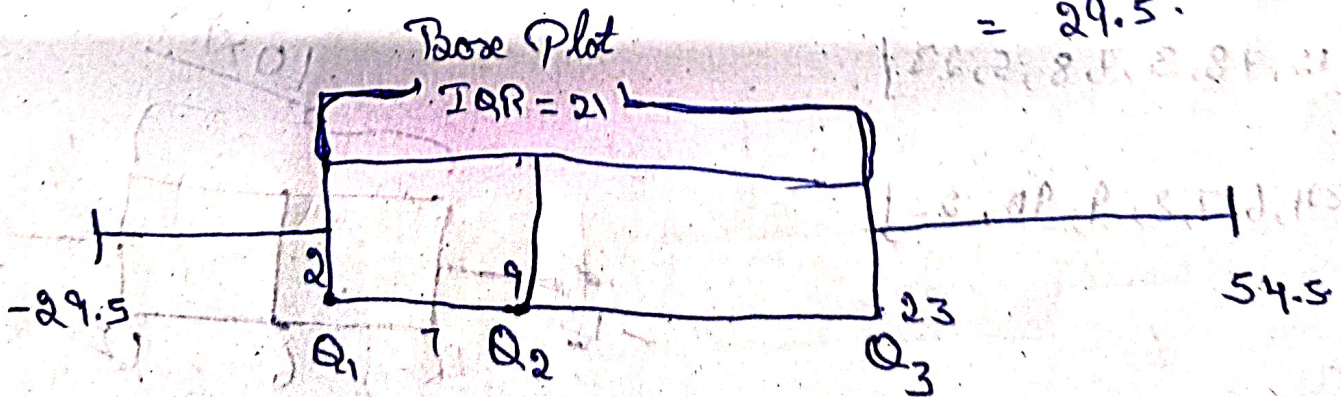
$$Q_2 = 9$$



$$X = Q_1 = 2.66$$

$$Y = Q_2 = 9, Q_1 = 2, Q_3 = 23$$

$$IQR = Q_3 - Q_1 = 23 - 2 = 21$$

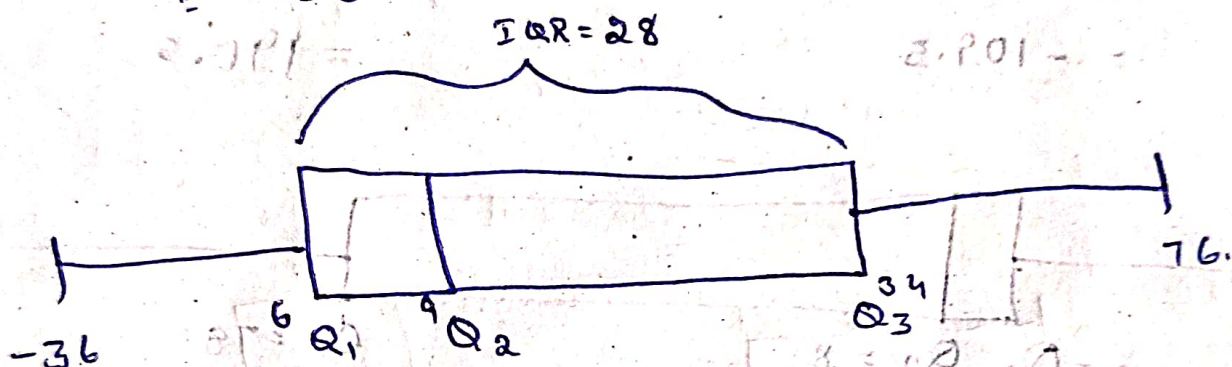


$$A = [9, 8, 6, 7, 34, 12, 12] = [6, 7, 8, 9, 12, 12, 34]$$

$$Q_1 = 6 \quad Q_3 = 34 \quad Q_2 = 9 \quad IQR = Q_3 - Q_1 = 34 - 6 = 28$$

$$\begin{aligned} \min &= Q_1 - 1.5 * IQR \\ &= 6 - 1.5 * 28 \\ &= -36 \end{aligned}$$

$$\begin{aligned} \max &= Q_3 + 1.5 * IQR \\ &= 34 + 1.5 * 28 \\ &= 76 \end{aligned}$$

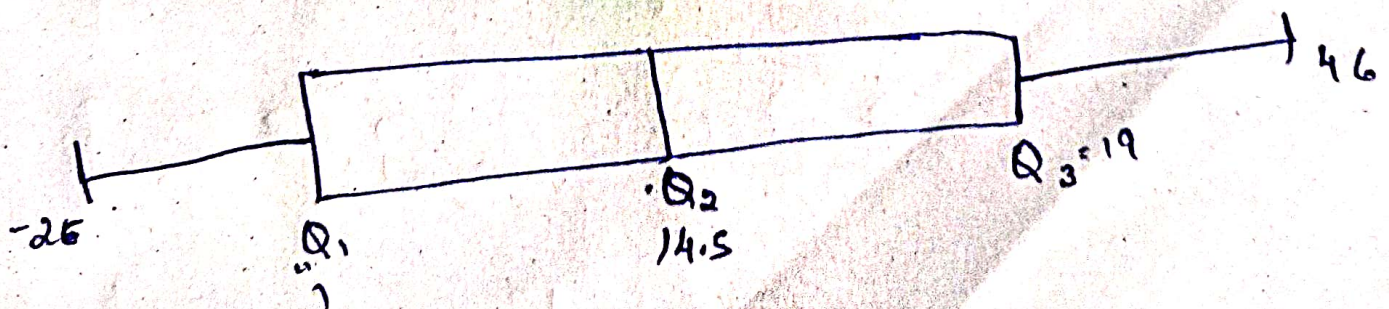


$$B = [12, 13, 16, 1, 18, 19] = [1, 12, 13, 16, 18, 19]$$

$$Q_1 = 1 \quad Q_3 = 19 \quad Q_2 = 14.5 \quad IQR = Q_3 - Q_1 = 18$$

$$\begin{aligned} \min &= Q_1 - 1.5 * IQR \\ &= 1 - 1.5 * 18 \\ &= -26 \end{aligned}$$

$$\begin{aligned} \max &= Q_3 + 1.5 * IQR \\ &= 19 + 1.5 * 18 \\ &= 46 \end{aligned}$$



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

$$Q_1 = 3$$

$$Q_3 = 78$$

$$Q_2 = 8 \quad IQR = 78 - 3 = 75$$

$$\min = Q_1 - 1.5 * IQR$$

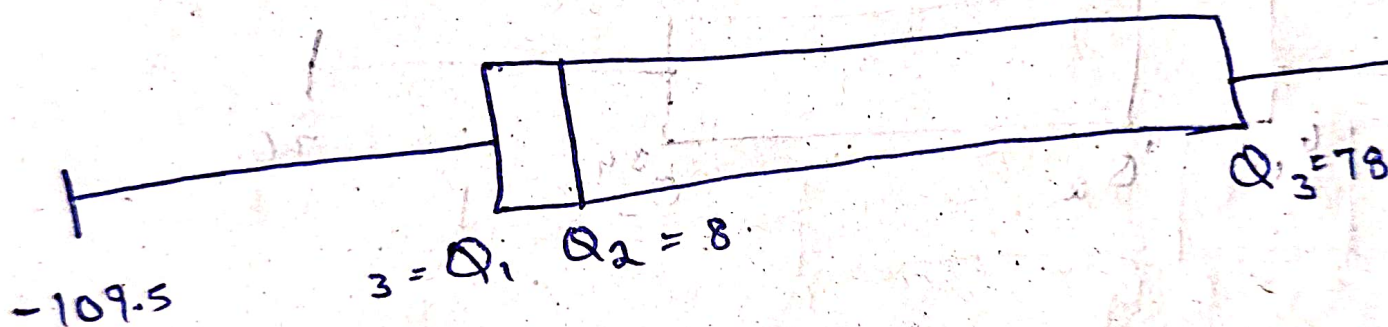
$$= 3 - 1.5 * 75$$

$$= -109.5$$

$$\max = Q_3 + 1.5 * IQR$$

$$= 78 + 1.5 * 75$$

$$= 190.5$$



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

$$Q_2 = 9 \quad \text{min} = Q_1 - 1.5 * 27$$

$$Q_1 = 7 \quad = 7 - 1.5 * 27$$

$$Q_3 = 34 \quad = -33.5$$

$$IQR = Q_3 - Q_1$$

$$\text{Max} = Q_3 + 1.5 * 27$$

$$= 34 - 7$$

$$34 + 1.5 * 27$$

$$= 27$$

$$74.5$$

