

INTERQUANTILE REPORT

10/04/2024

Interquartile Range(IQR)

- The interquartile range. Compare the two interquartile ranges.
- Any outliers in either set.

The five number summary for the day and night classes is

	Minimum	Q_1	Median	Q_3	Maximum
Day	32	56	74.5	82.5	99
Night	25.5	78	81	89	98

$$IQR = Q_3 - Q_1$$

$$Q_1 = 56 \quad \quad \quad = 82.5 - 56$$

$$Q_3 = 82.5 \quad \quad \quad = 26.5$$

Day:

$$\begin{aligned} (1.5)(IQR) &= 1.5 \times 26.5 & Q_1 - (1.5)(IQR) &= 56 - 39.75 & Q_3 + (1.5)(IQR) &= 82.5 + 39.75 \\ &= 39.75 & \text{Lesser} &= 16.25 & \text{greater} &= 122.22 \end{aligned}$$

SUMMARY:

In Day Class **Not less** than 16.25. In Maximum **not greater** than 122.22

So no Potential Outlier

Night:

$$Q_1 = 78 \quad \quad \quad IQR = Q_3 - Q_1$$

$$Q_3 = 89 \quad \quad \quad = 89 - 78$$

$$= 11$$

$$(1.5)(IQR)=1.5 \times 11 = 16.5$$

$$Q1 - (1.5)(IQR) = 78 - 16.5 = 61.5 \quad \text{Lesser}$$

$$Q3 + (1.5)(IQR) = 89 + 16.5 = 105.5 \quad \text{greater}$$

SUMMARY:

In Night Class **Not less** than 61.5. In Maximum **not greater** than 105.5

So no Potential Outlier