

INTERQUARTILE RANGE (IQR)

Interquartile Range(IQR)

a. The interquartile range. Compare the two interquartile ranges.
b. 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

Manual Calculation

FOR DAY

$$\text{IQR} = 82.5 - 56 = 26.5$$

$$(1.5)(\text{IQR}) = (1.5)(26.5) = 39.75$$

Lesser

$$Q_1 - (1.5)(\text{IQR}) = 56 - 39.75 = 16.25$$

Greater

$$Q_3 + (1.5)(\text{IQR}) = 82.5 + 39.75 = 122.25$$

So now we can see lesser value is placed in our dataset ,

Why because lesser calculation value lesser then minimum value .

FOR NIGHT

$$\text{IQR} = 78 - 89 = 11$$

$$(1.5) (\text{IQR}) = (1.5) (11) = 16.5$$

Lesser

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

Greater

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

So hear lesser value is compare to minimum value its high witch means there is no lesser values,

And hear at same greater value more the high from maximum value (outlier)