

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 now we can see hear lesser value and greater value in our dataset .

Why because we can see lesser value more the high from minimum value at the same we can see outlier as well .