

# Central Tendency Assignment 3

- 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

## Day Class

$$IQR = Q_3 - Q_1$$

$$\Rightarrow 82.5 - 56$$

Inter Quartile Range (IQR) of Day class = 26.5

$$\text{Lesser Range} = Q_1 - (1.5)(IQR)$$

$$\Rightarrow 56 - (1.5)(26.5)$$

Lesser Range for the Day class = 16.25

$$\text{Greater Range} = Q_3 + (1.5)(IQR)$$

$$\Rightarrow 82.5 + (1.5)(26.5)$$

Greater Range for the Day class = 42.75

## Outliers

$$\Rightarrow \text{The Day class have the Greater Range Outliers}$$

## Night Class

$$IQR = Q3 - Q1$$

$$\Rightarrow 89 - 78$$

Inter Quartile Range (IQR) of Day class = 11

$$Lesser\ Range = Q1 - (1.5)(IQR)$$

$$\Rightarrow 78 - (1.5)(11)$$

Lesser Range for the Day class = 61.5

$$Greater\ Range = Q3 - (1.5)(IQR)$$

$$\Rightarrow 72.5 + (1.5)(11)$$

Greater Range for the Day class = 72.5

## Outliers

$\Rightarrow$  The Night class have both Greater and Lesser Range Outliers