

IQR Calculation

	Min	Q1	Median	Q3	Max
Day	32	56	74.5	82.5	99
Night	25.5	78	81	89	98

For Day:

$$(IQR)_D = Q3_D - Q1_D = 82.5 - 56 = 26.5$$

$$\text{Lesser range outlier} = Q1_D - 1.5(IQR)_D = 56 - 1.5 \times 26.5 = \mathbf{16.25}$$

$$\text{Greater range outlier} = Q3_D + 1.5(IQR)_D = 82.5 + 1.5 \times 26.5 = \mathbf{122.25}$$

For Night:

$$(IQR)_N = Q3_N - Q1_N = 89 - 78 = 11$$

$$\text{Lesser range outlier} = Q1_N - 1.5(IQR)_N = 78 - 1.5 \times 11 = \mathbf{61.5}$$

$$\text{Greater range outlier} = Q3_N + 1.5(IQR)_N = 89 + 1.5 \times 11 = \mathbf{105.5}$$

Summary:

For Day,

- Min value **32** > lesser range outlier **16.25**, so lesser outlier is not present
- Max value **99** < greater range outlier **122.25**, so greater outlier is not present.

For Night,

- Min value **25.5** < lesser range outlier **61.5**, so lesser outlier is present. It needs to be replaced.
- Max value **99** < the greater range outlier **105.5**, so greater outlier is not present.