

Interquartile Range (IQR)

a.) the interquartile range. compare the two interquartile ranges.

b.) Any outliers in either set.

The fire number summary for the day and night classes is

	Minimum	Q_1	Median	Q_3	Maximum
Day	32	56	74.5 (70)	82.5	99
Night	25.5	78	81	89	98

Day:

$$IQR = 82.5 - 56 = 26.5$$

$$(1.5)(IQR) = (1.5)(26.5) = 39.75$$

$$Q_1 - (1.5)(IQR) = 56 - 39.75 = 16.25$$

$$Q_3 + (1.5)(IQR) = 82.5 + (1.5)(26.5) = 122.25$$

In Day, there is no lesser outlier and greater outlier.

(Any values below 16.25 or above 122.25 would be considered outliers)

Night :

$$IQR = 89 - 78 = 11$$

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

$$Q_1 - (1.5)(IQR) = 78 - (1.5)(11) = 78 - 16.5 = 61.5$$

$$Q_3 + (1.5)(IQR) = 89 + 16.5 = ~~72.5~~ 105.5$$

In Night,

lessor outlier is present.

$\therefore 25.5$ is an outlier.

(Any values below 61.5 or above 105.5 would be considered outliers.)