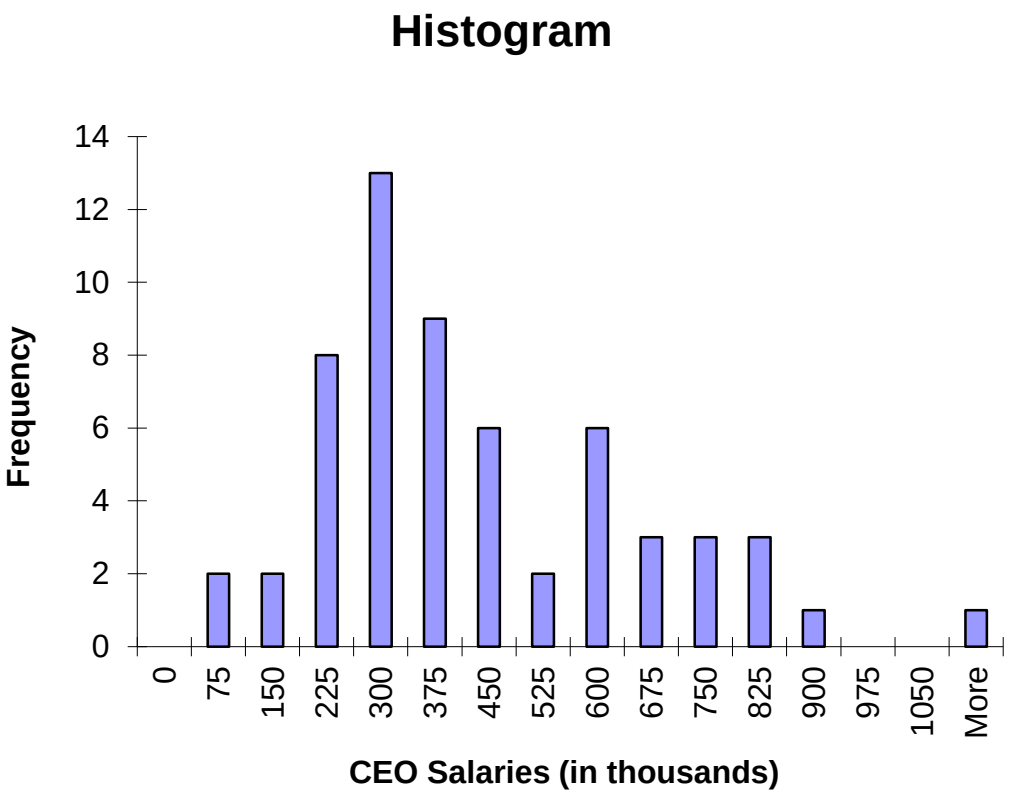
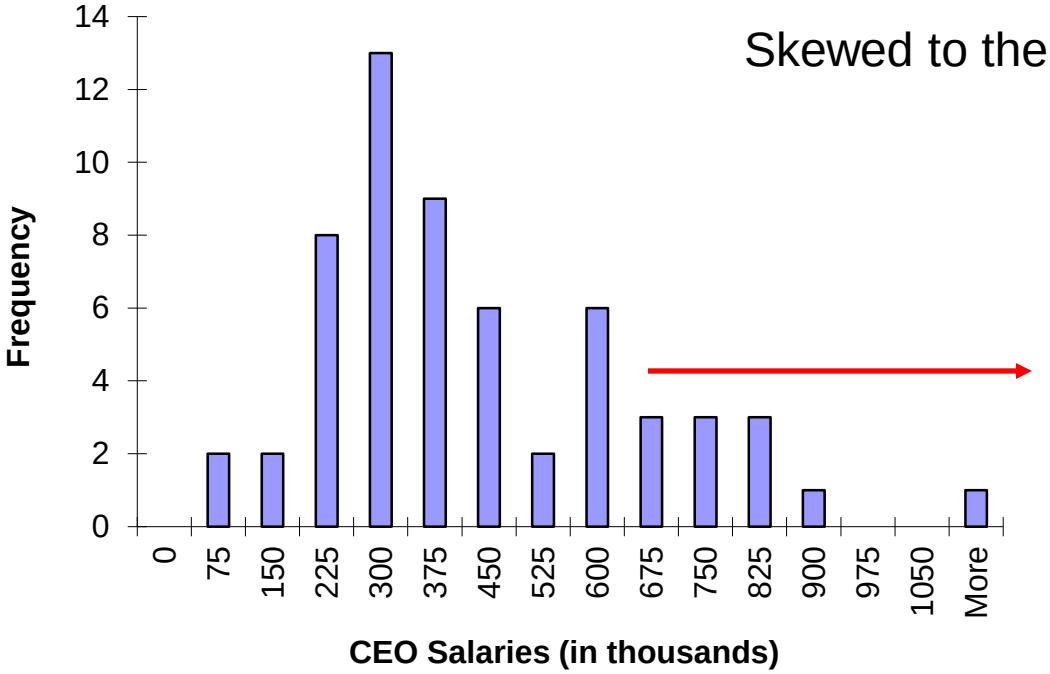
Mean versus Median

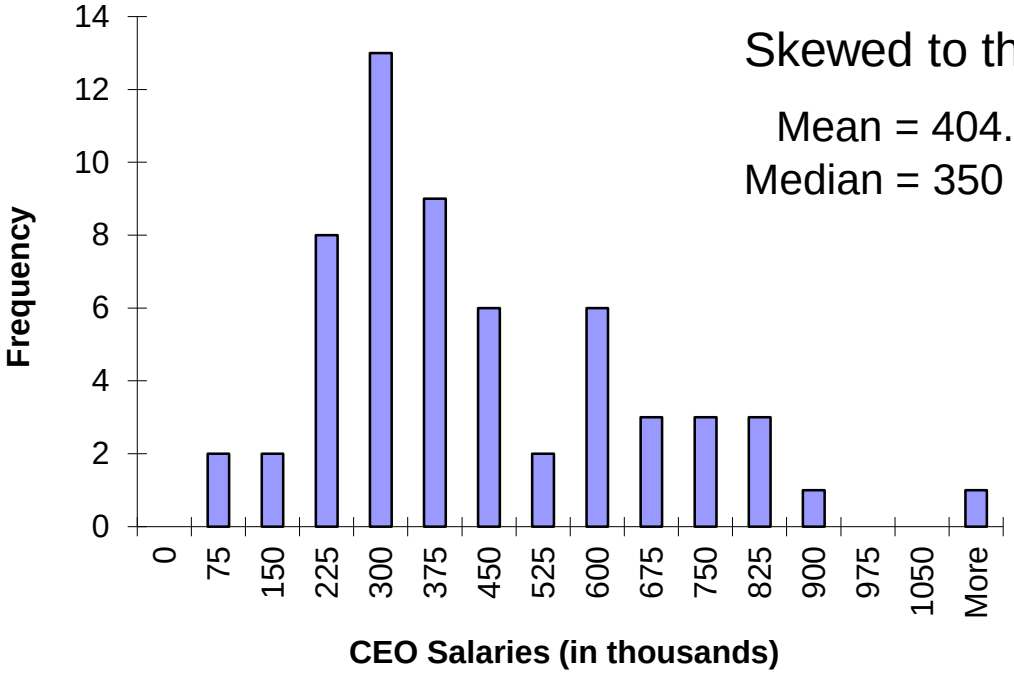
‘Skewness’ of the data


Histogram
Frequency
14
12
10
8
6
4
2
0
0
75
150
225
300
375
450
525
600
675
750
825
900
975
1050
More
CEO Salaries (in thousands)

Histogram


Skewed to the right
Frequency
14
12
10
8
6
4
2
0
0
75
150
225
300
375
450
525
600
675
750
825
900
975
1050
More
CEO Salaries (in thousands)

Histogram

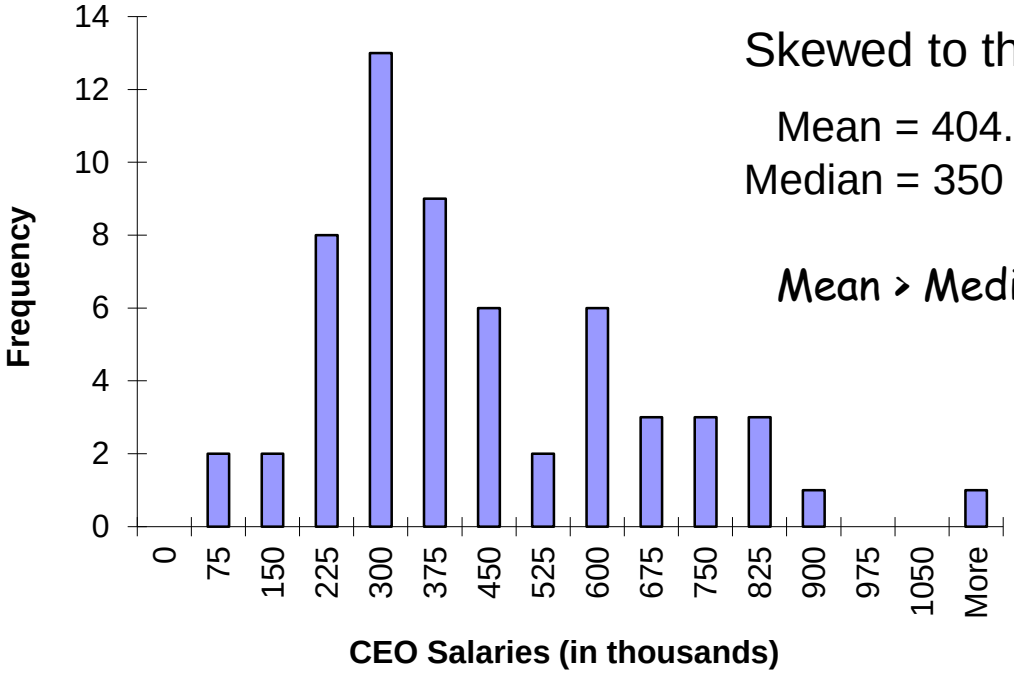


Skewed to the right

Mean = 404.17

Median = 350

Histogram



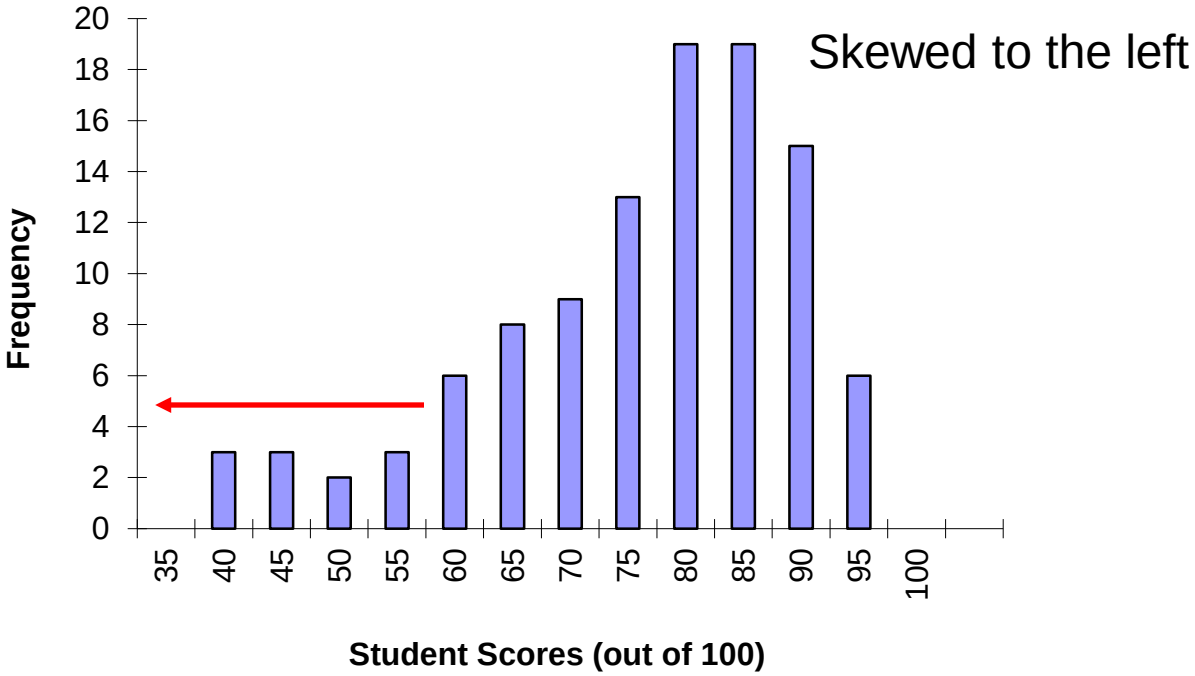
Skewed to the right

Mean = 404.17

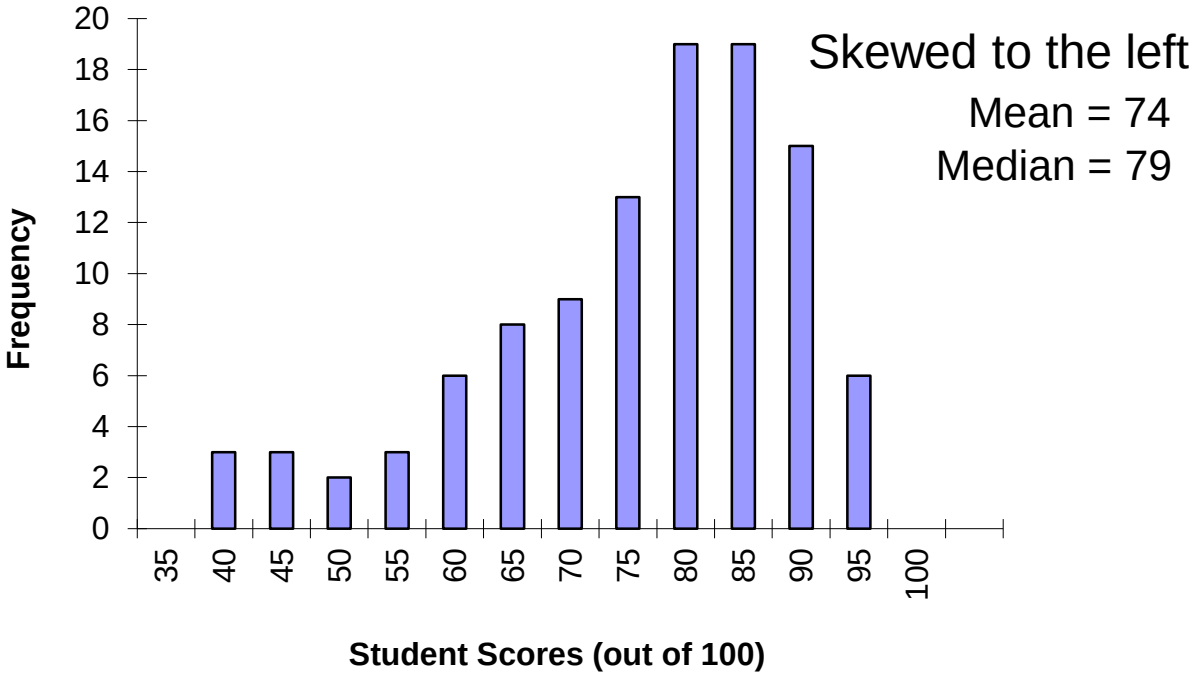
Median = 350

Mean > Median

Histogram


Skewed to the left
Frequency
0
2
4
6
8
10
12
14
16
18
20
35
40
45
50
55
60
65
70
75
80
85
90
95
100
Student Scores (out of 100)

Histogram

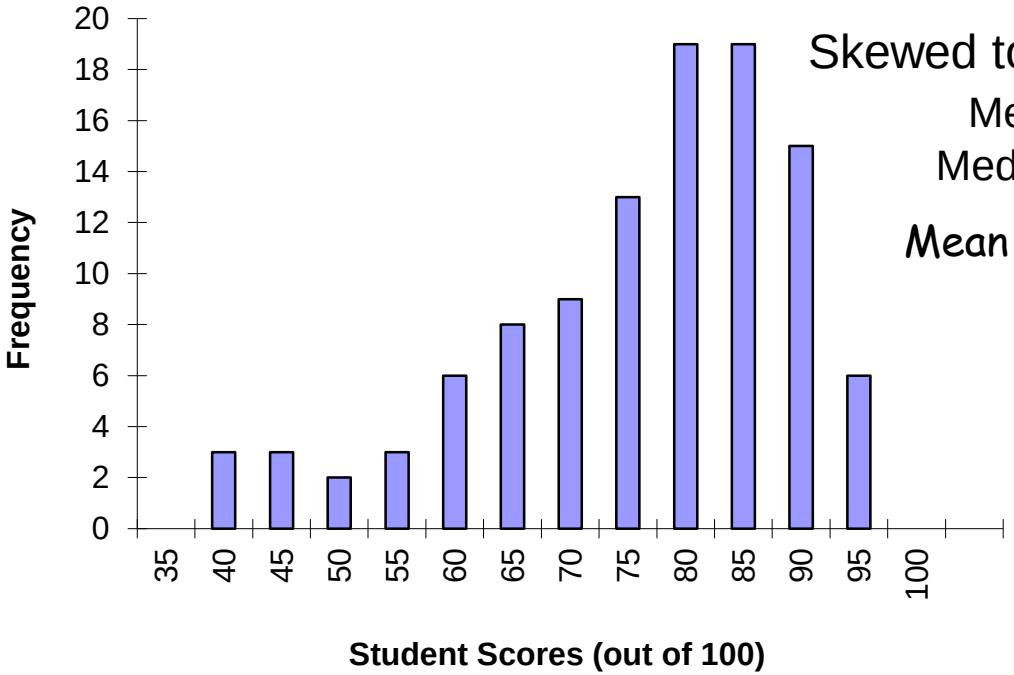


Skewed to the left

Mean = 74

Median = 79

Histogram



Skewed to the left

Mean = 74

Median = 79

Mean < Median

Mode

The mode is the most frequently occurring value in a set of data.

Mode

The mode is the most frequently occurring value in a set of data.

=MODE.SNGL(*number1, number2, …*)

Mode

Not a very relevant descriptive statistic when the data is essentially continuous.

Date	Rate
1-Jan-16	0.920945
2-Jan-16	0.920555
4-Jan-16	0.920725
5-Jan-16	0.926355
6-Jan-16	0.931012
7-Jan-16	0.929196
8-Jan-16	0.921235
9-Jan-16	0.917684
11-Jan-16	0.91533
12-Jan-16	0.918274
13-Jan-16	0.923063
…	…
…	…

Daily exchange rate, Dollar to Euro

Measures of Central Tendency

Mean

Median

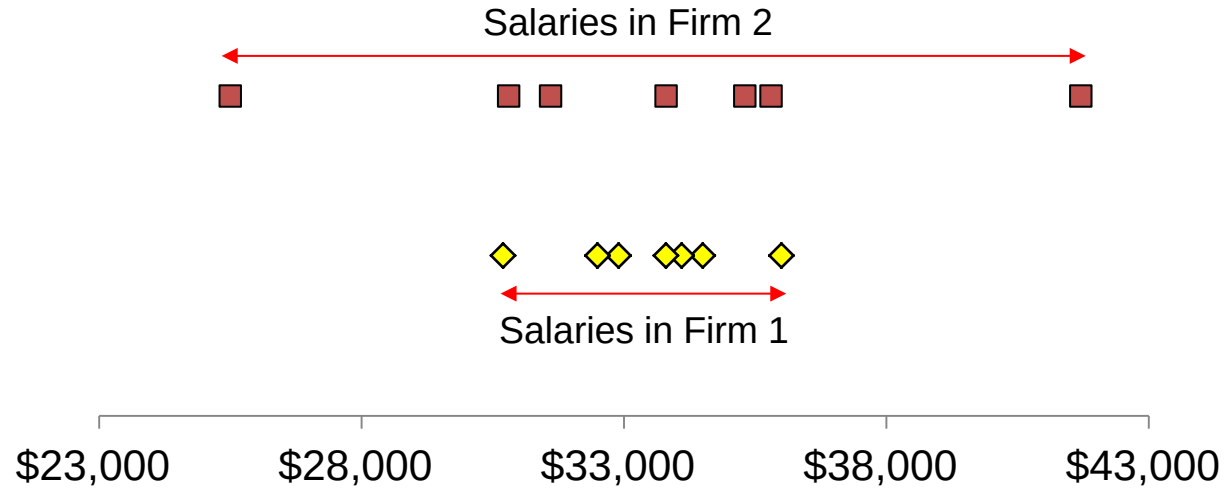
Mode

Measures of Dispersion / Spread

Measures of Dispersion / Spread

Firm 1	Firm 2
$34,500	$35,800
$30,700	$25,500
$32,900	$31,600
$36,000	$41,700
$34,100	$35,300
$33,800	$33,800
$32,500	$30,800
Mean = $33,500	**Mean = $33,500**
Median = $33,800	**Median = $33,800**

Measures of Dispersion / Spread



Measures of Dispersion / Spread

The ‘Range’ measure

= Maximum of data - Minimum of data

Measures of Dispersion / Spread

Range of salaries in Firm 1

= Maximum Salary - Minimum Salary

= $36,000 - $30,700

= **$5,300**

Range of salaries in Firm 2

= Maximum Salary - Minimum Salary

= $41,700 - $25,500

= **$16,200**

Measures of Dispersion / Spread

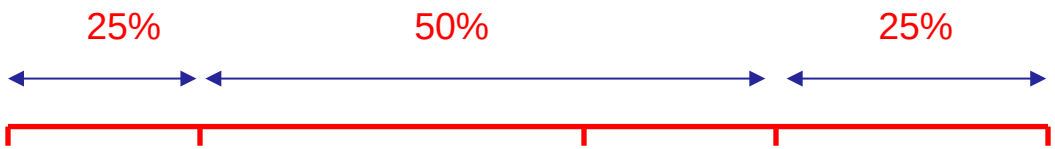
The ‘Range’ measure

The ‘Inter Quartile Range’ measure

Measures of Dispersion / Spread

The ‘Range’ measure

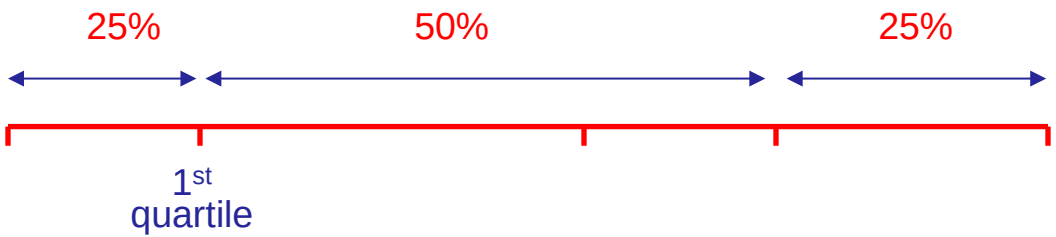
The ‘Inter Quartile Range’ measure



Measures of Dispersion / Spread

The ‘Range’ measure

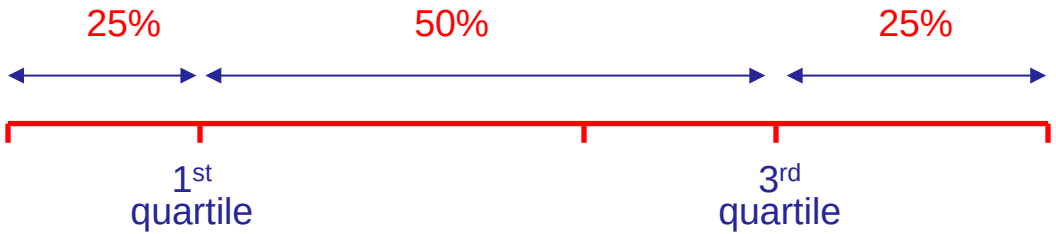
The ‘Inter Quartile Range’ measure



Measures of Dispersion / Spread

The ‘Range’ measure

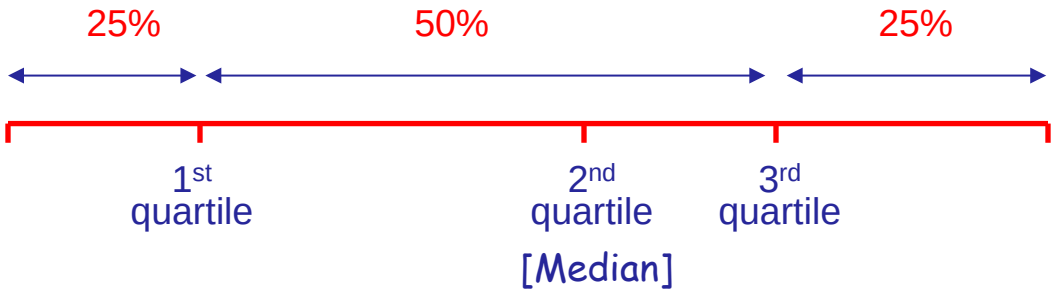
The ‘Inter Quartile Range’ measure



Measures of Dispersion / Spread

The ‘Range’ measure

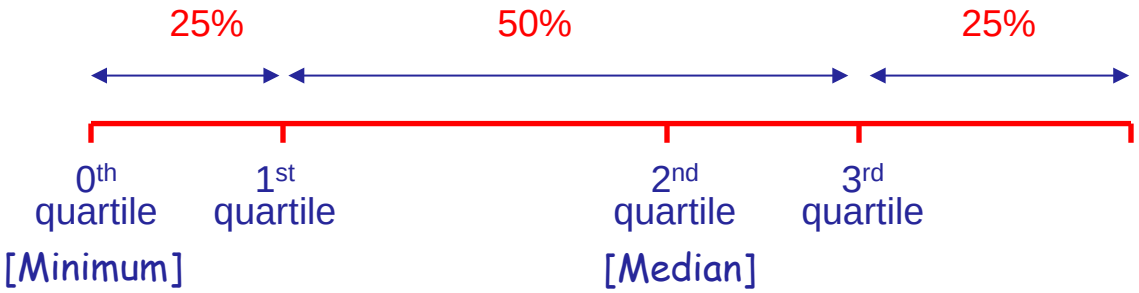
The ‘Inter Quartile Range’ measure



Measures of Dispersion / Spread

The ‘Range’ measure

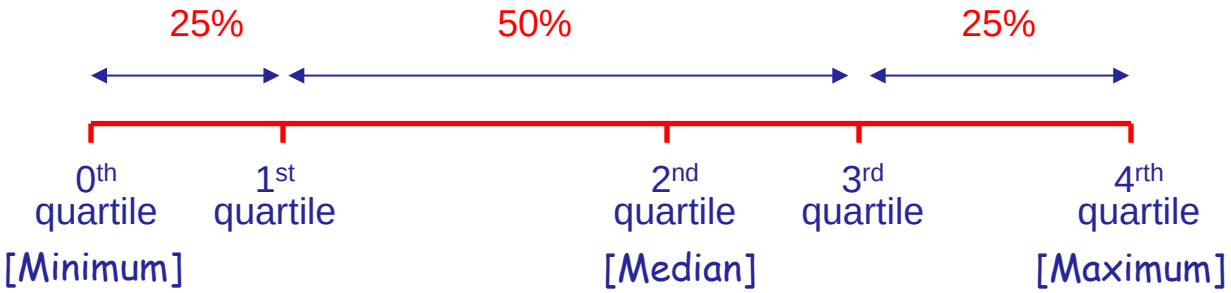
The ‘Inter Quartile Range’ measure



Measures of Dispersion / Spread

The ‘Range’ measure

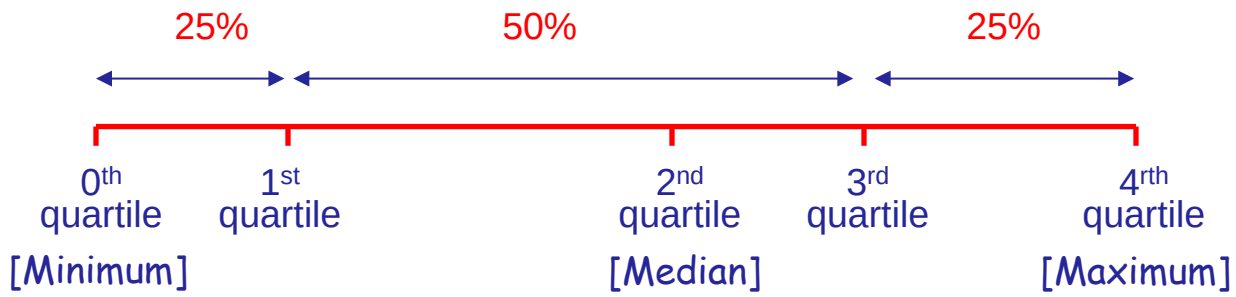
The ‘Inter Quartile Range’ measure



Measures of Dispersion / Spread

The ‘Range’ measure

The ‘Inter Quartile Range’ measure



IQR = 3rd quartile – 1st quartile

Measures of Dispersion / Spread

The ‘Range’ measure

The ‘Inter Quartile Range’ measure

=QUARTILE.INC( )

Measures of Dispersion / Spread

The ‘Range’ measure

The ‘Inter Quartile Range’ measure

=QUARTILE.INC(*array, quart*)

Measures of Dispersion / Spread

The ‘Range’ measure

The ‘Inter Quartile Range’ measure

=QUARTILE.INC(*array, quart*)

IQR = QUARTILE.INC(*array, 3*) - QUARTILE.INC(*array, 1*)