

Descriptive Statistics



Descriptive Statistics

A set of numbers that 'describe' a data



Measures of Central Tendency (the various averages)

Measures of Dispersion



Measures of Central Tendency (the various averages)

Some 'central' aspect of the data

Measures of Dispersion



Measures of Central Tendency (the various averages)

Some 'central' aspect of the data

Measures of Dispersion

How 'spread-out' or 'dispersed' the data is



Measures of Central Tendency

Mean (the Arithmetic mean)

Median

Mode

Mean

The mean of the following set of observations,

is
$$\frac{5+0.9+0.2+2+1}{5} = 1.82$$





Median

The Median of a set of ordered observations is a middle number that divides the data into two parts.





Median

The Median of a set of ordered observations is a middle number that divides the data into two parts.

=MEDIAN(number1, number2, ...)



Median

The Median of a set of ordered observations is a middle number that divides the data into two parts.

=MEDIAN(number1, number2, ...)





When is a Median a better summary description of data as compared to the Mean?



When is a Median a better summary description of data as compared to the Mean?

```
28,000 $
33,000 $
33,000 $
34,000 $
37,000 $
40,000 $
```



When is a Median a better summary description of data as compared to the Mean?

```
28,000 $
33,000 $
What is the 'typical' salary in this group?

34,000 $
37,000 $
40,000 $
400,000 $
```



When is a Median a better summary description of data as compared to the Mean?

```
28,000 $
33,000 $
What is the 'typical' salary in this group?

Mean = 86,000$

40,000 $
400,000 $
```



When is a Median a better summary description of data as compared to the Mean?

```
28,000 $
33,000 $
What is the 'typical' salary in this
group?

Mean = 86,000$

Median = 34,000$
```



The Mean is influenced to a greater extent by extreme observations



The Mean is influenced to a greater extent by extreme observations

Income and Price data generally follow this pattern