

PSYC 60 – Statistics
Spring 2012
Notes #2

*Book: Chapter 2 – Describing Data with Tables & Graphs
Chapter 3 – Describing Data with Averages*

Distribution Properties

Values –

Frequency –

Range –

Mean -

Mode –

Median –

Measures of central tendency -

Distribution Shapes

Normal

Unimodal

Bimodal

Right skewed

Left skewed

Uniform

Much of the time, our statistical methods only work if we have a _____ distribution. If we do not have such a distribution, our conclusions may be _____.

Mean

Definition-

Example: 2 5 6 3 -1

Sigma Notation

\sum_i

X_i

Symbols

Median

Examples:

8 20 -2 0 6

8 20 -2 0

4 5 5 7 2 5 1

Score Count

0 1

1 3

2 0

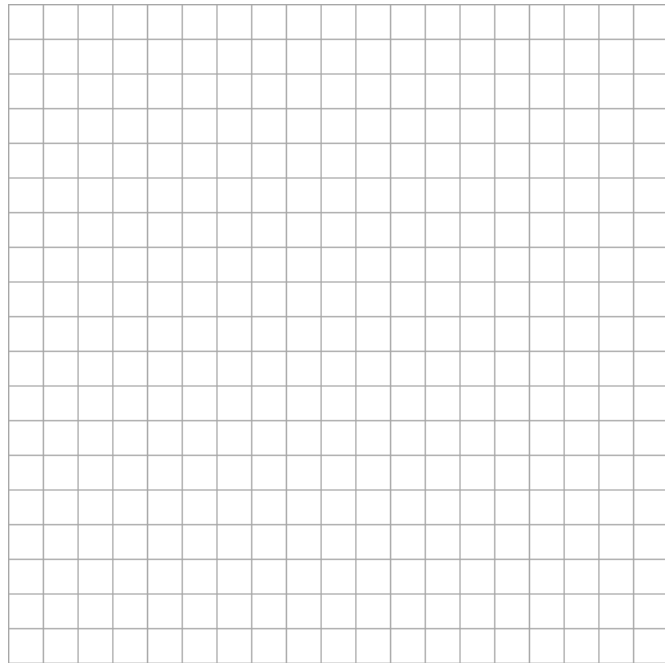
3 2

4 1

Samples versus Populations

Book: Chapter 8 – Population & Samples

Population



Sample

Can we know the whole population?

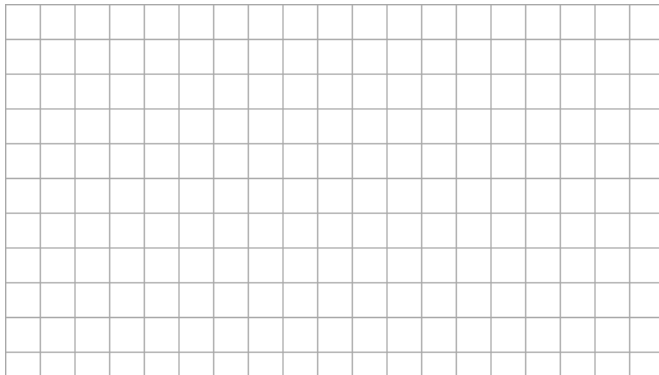
How effects change distributions

Original
Grade

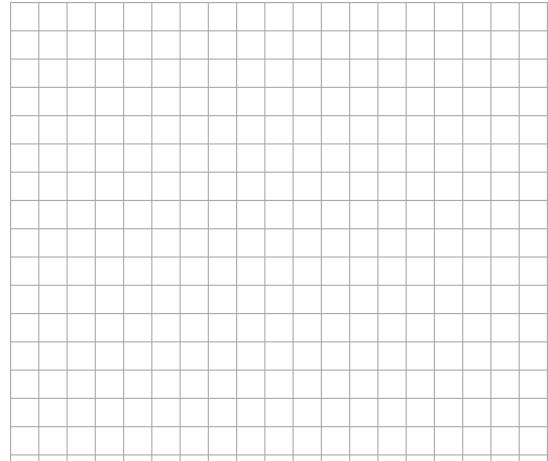
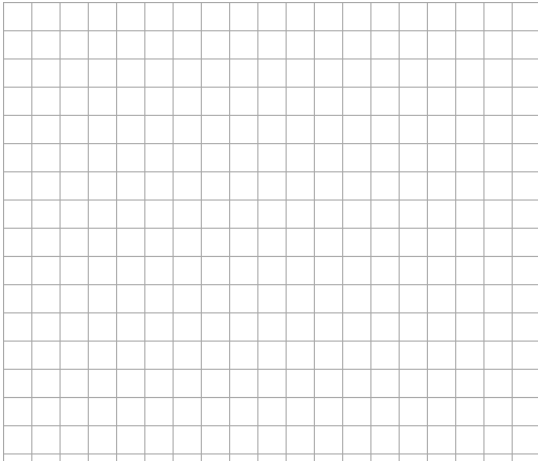
Curve
(effect)

New
Grade

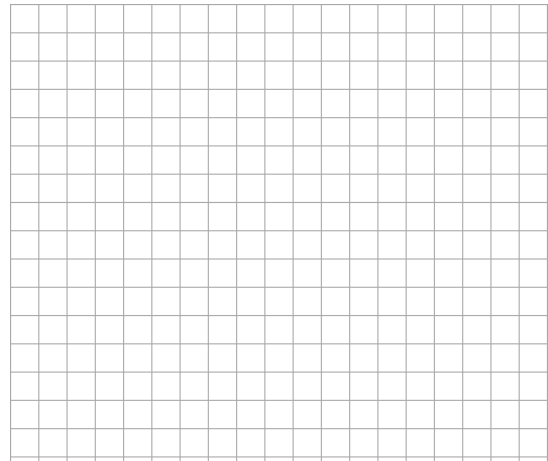
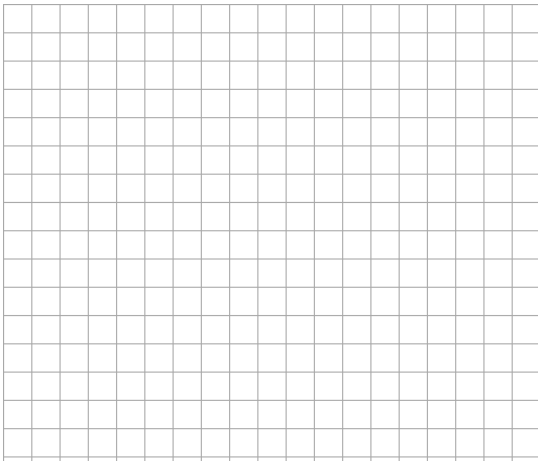
- 60
- 64
- 62
- 61
- 62



Sample differences due to EFFECT or CHANGE?



Effect Size & Variability



Variability: Variance and Standard Deviation

Book: Chapter 4 – Describing Variability

How many hours do students spend working on stats this week? How spread out are the values?

Hours

4
6
5
3
2

Hours

4
3
5
4.5
3.5

Steps

1. Find mean
2. Find each score's deviation
3. Square each score's deviation
4. Sum the squares
5. Divide by number of scores =
6. Take the square root =

Formula