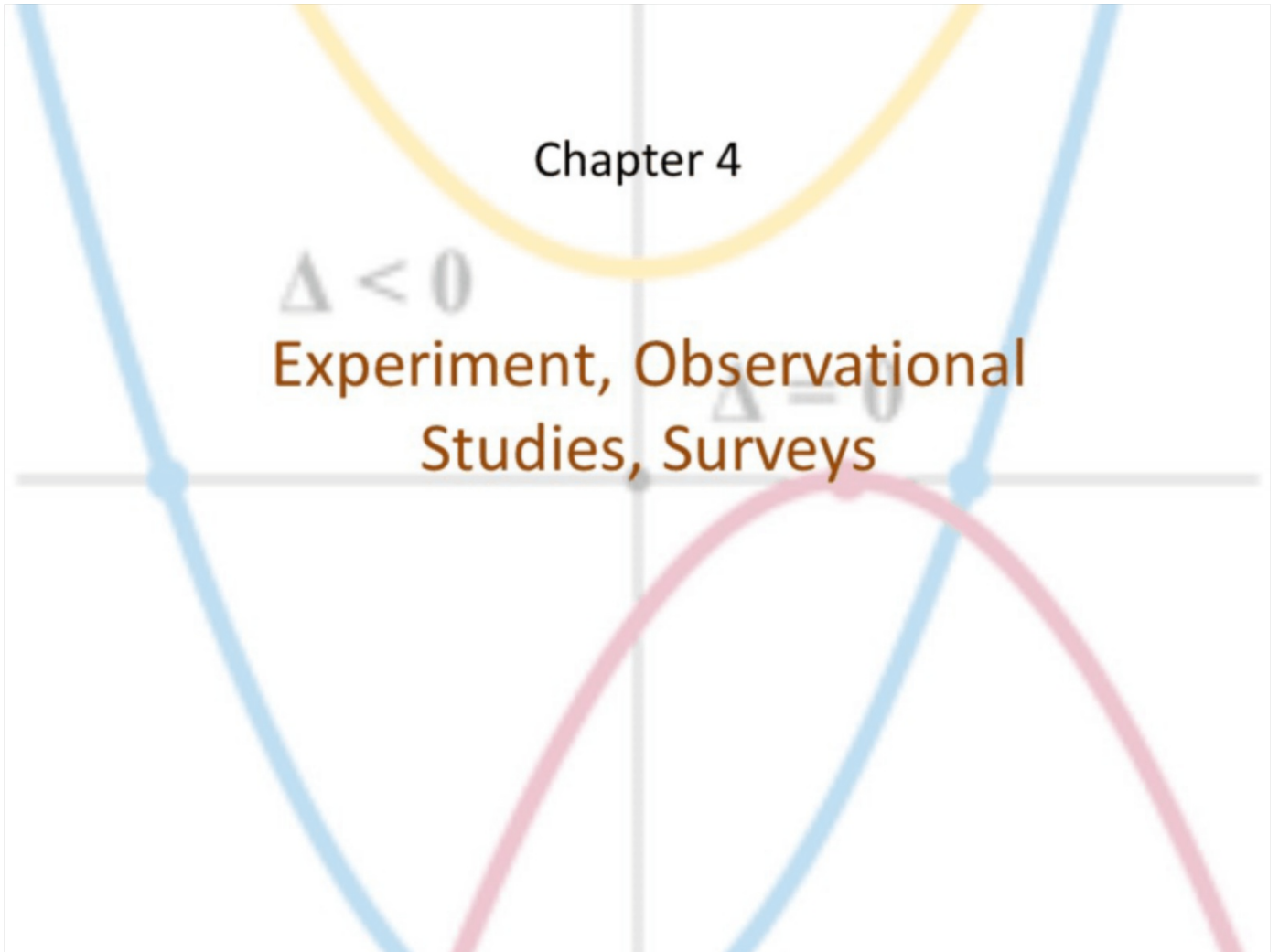


Chapter 4

$\Delta < 0$

Experiment, Observational
Studies, Surveys

$\Delta = 0$



Objective

Students will...

- Be able to define experiments, observational studies, and surveys.
- Be able to determine which method is best for various research questions.

Experiment

An **experiment** is a method of study that involves trials.

There are three major components to an experiment:

1. Question/Hypothesis
2. Control Group
3. Experimental/Treatment Group

A **control group** is a group of people in an experiment that does not receive treatment, or not experimented on, in order to be used as a benchmark in comparison to the **experimental/treatment group**.

A **placebo** is something that is used to “fool” or “blind” the control group, in order to eliminate any type of bias in the experiment.

Observational Study

An **observational study** is a one-way study, where the researchers observe and gather the needed data on their own.

The key feature of an observational study is that the research candidates are **passive** during this study. Virtually everything is done by the researchers.

This type of study is useful when the data can be observed outwardly.

Survey

A **survey** is a type of a study that is done by researchers asking a series of questions to the research participants.

The set-up is somewhat similar to an experiment, but there are no control groups.

There are also no trials involved in a survey. Data gathered is dependent on the effectiveness of the questions, and the participants' answers to those questions.