

STAT 151 Midterm Review

Arseniy Kouzmenkov

University of Alberta

May 25, 2019

Outline

- 1 Introduction to Presentation
- 2 Types of Samples
- 3 Types of Studies
- 4 Quartiles
- 5 Mean, Median, IQR, and Standard Deviation
- 6 Normal Distributions
- 7 Expected Value
- 8 Dependent Probability
- 9 Sampling Distributions
- 10 Sample Questions

Introduction to Presentation

This presentation was made by Arseniy Kouzmenkov for use by LHSA.

Introduction to Presentation

This presentation was made by Arseniy Kouzmenkov for use by LHSA.

What this presentation will help you with:

- Point out gaps in understanding.

Introduction to Presentation

This presentation was made by Arseniy Kouzmenkov for use by LHSA.

What this presentation will help you with:

- Point out gaps in understanding.
- Help you figure out what topics to focus on.

Introduction to Presentation

This presentation was made by Arseniy Kouzmenkov for use by LHSA.

What this presentation will help you with:

- Point out gaps in understanding.
- Help you figure out what topics to focus on.
- Teach you where to look in the formula sheet.

Introduction to Presentation

This presentation was made by Arseniy Kouzmenkov for use by LHSA.

What this presentation will help you with:

- Point out gaps in understanding.
- Help you figure out what topics to focus on.
- Teach you where to look in the formula sheet.
- Give some sample questions to go through.

Introduction to Presentation

This presentation was made by Arseniy Kouzmenkov for use by LHSA.

What this presentation will help you with:

- Point out gaps in understanding.
- Help you figure out what topics to focus on.
- Teach you where to look in the formula sheet.
- Give some sample questions to go through.

What this presentation will **not** help you with:

- Teach you new material, this is a review after all.

Introduction to Presentation

This presentation was made by Arseniy Kouzmenkov for use by LHSA.

What this presentation will help you with:

- Point out gaps in understanding.
- Help you figure out what topics to focus on.
- Teach you where to look in the formula sheet.
- Give some sample questions to go through.

What this presentation will **not** help you with:

- Teach you new material, this is a review after all.
- Learn all the material from scratch.

Introduction to Presentation

This presentation was made by Arseniy Kouzmenkov for use by LHSA.

What this presentation will help you with:

- Point out gaps in understanding.
- Help you figure out what topics to focus on.
- Teach you where to look in the formula sheet.
- Give some sample questions to go through.

What this presentation will **not** help you with:

- Teach you new material, this is a review after all.
- Learn all the material from scratch.
- Substitute the Sample Midterm or your professor's notes

Introduction to Presentation

This presentation was made by Arseniy Kouzmenkov for use by LHSA.

What this presentation will help you with:

- Point out gaps in understanding.
- Help you figure out what topics to focus on.
- Teach you where to look in the formula sheet.
- Give some sample questions to go through.

What this presentation will **not** help you with:

- Teach you new material, this is a review after all.
- Learn all the material from scratch.
- Substitute the Sample Midterm or your professor's notes

Now that the expectations are set, let's begin!

Types of Samples

- Simple Random Sample:

A random selection from the whole population.

e.g.: Picking a random hockey player from all hockey players.

Types of Samples

- Simple Random Sample:

A random selection from the whole population.

e.g.: Picking a random hockey player from all hockey players.

- Stratified Random Sample:

Divide populations into groups, then randomly pick from those groups.

e.g.: Dividing hockey players into age groups and then randomly picking a player from each age group.

Types of Samples

- Simple Random Sample:

A random selection from the whole population.

e.g.: Picking a random hockey player from all hockey players.

- Stratified Random Sample:

Divide populations into groups, then randomly pick from those groups.

e.g.: Dividing hockey players into age groups and then randomly picking a player from each age group.

- Systematic Sampling:

Selection from the whole population based on a specific method.

e.g.: Picking every 9th hockey player for a survey.