

DAILY ASSESSMENT FORMAT

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Course:	coursera	USN:	4AL17EC076
Topic:	Basic statistics	Semester & Section:	6th sem 'B' sec
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FORENOON SESSION DETAILS

Image of session

This screenshot shows the 'Welcome to Basic Statistics!' video player. The interface includes a left sidebar with a course menu, a central video player, and a right sidebar with a notes section. The video shows two men in white shirts. Below the video are controls for saving notes, discussing, and downloading, along with a language dropdown set to 'English' and a 'Help Us Translate' link. The top navigation bar shows 'Basic Statistics > Week 1 > Welcome to Basic Statistics' and 'Prev | Next' buttons. The bottom taskbar shows the Windows OS with various application icons and a system clock displaying 12:12 on 28-07-2020.

Basic Statistics > Week 1 > Welcome to Basic Statistics Prev | Next

Course introduction

- Reading: Hi there! 10 min
- Video: Welcome to Basic Statistics! 3 min**
- Reading: How to navigate this course 10 min
- Reading: How to contribute 10 min

What to expect from this course

Data and visualisation

Measures of central tendency and dispersion

Z-scores and example

Review

Welcome to Basic Statistics!

BASIC STATISTICS INTRODUCTION

Save Note Discuss Download

English Help Us Translate

Notes All notes

Click the "Save Note" button when you want to capture a screen. You can also highlight and save lines from the transcript below. Add your own notes to anything you've captured.

12:12 28-07-2020

This screenshot shows the 'General info - What will I learn in this course?' page. The left sidebar is updated to show the 'Video: Welcome to Basic Statistics!' as completed. The main content area contains an overview of the course structure, divided into three parts: descriptive statistics, probability, and inferential statistics. A 'Mark as completed' button is visible at the bottom right of the content area. The top navigation bar and bottom taskbar are consistent with the previous screenshot.

Basic Statistics > Week 1 > General info - What will I learn in this course? Prev | Next

Course introduction

- Reading: Hi there! 10 min
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General info - What will I learn in this course?

Understanding statistics is essential to understand research in the social and behavioral sciences. In this course you will learn the basics of statistics; not just how to calculate them, but also how to evaluate them. This course will also prepare you for the next course in the specialization - the course Inferential Statistics.

In the first part of the course we will discuss methods of descriptive statistics. You will learn what cases and variables are and how you can compute measures of central tendency (mean, median and mode) and dispersion (standard deviation and variance). Next, we discuss how to assess relationships between variables, and we introduce the concepts correlation and regression.

The second part of the course is concerned with the basics of probability: calculating probabilities, probability distributions and sampling distributions. You need to know about these things in order to understand how inferential statistics work.

The third part of the course consists of an introduction to methods of inferential statistics - methods that help us decide whether the patterns we see in our data are strong enough to draw conclusions about the underlying population we are interested in. We will discuss confidence intervals and significance tests.

You will not only learn about all these statistical concepts, you will also be trained to calculate and generate these statistics yourself using freely available statistical software.

Mark as completed

12:15 28-07-2020

Courses for Students | Courses

R lab - Getting started (part 1)

Exercise: Taming your data | R

How it works | R

campus.datacamp.com/course/basic-statistics/lab-0-the-basics-of-r/you-9

☆

DataCamp

Course Outline

10 Exercise

The final line will convert the character string "1 1" to the integer 1. The second line will convert the character string "0.5" to the numeric 0.5.

+100 XP

Well done, this concludes the exercises of working with variables

PRESS ENTER TO

Continue

11 Show Answer (+100 XP)

scriptR

```
9 # See whether var1_char is a character
10 is.character(var1_char)
11
12 # var2 is numeric; convert it to logical: var2_log
13
14 var2_log<-as.logical(var2)
15 # Inspect the class of var2_log
16 class(var2_log)
17
18 # var3 is character; convert it to numeric: var3_num
19 var3_num<-as.numeric(var3)
```

Run Code

Submit Answer

R Console

```
>
> # var1 is logical; convert it to character: var1_char
> var1_char<-as.character(var1)
>
> # See whether var1_char is a character
> is.character(var1_char)
[1] TRUE
>
> # var2 is numeric; convert it to logical: var2_log
```

Windows taskbar with icons for File Explorer, Edge, and other applications. System tray shows date and time: 14:21 28-07-2020.

20-07-2020

Cases, variables and levels of measurements :-

Variables → characteristics of players

Cases → players.

→ All the characteristics have the variation so they are called as variable.

→ If the characteristics doesnot vary then they are called constants.

Discrete → set of separate numbers

Continuous → infinite region of values.

Data matrix and frequency table :-

study

data

Data matrix and frequency table :-

study

data

variables

cases

↑
characteristics
of something

↑
something or
someone

↑
order & present

Data matrix	variables
Cases	

→ cases in the row

→ variables are represented in column.

Data matrix → All statistical analysis.

Frequency table → Shows how the values are distributed over the cases.

Z-scores :-

Mean $\bar{x} = 15$

Standard deviation $S = 2.5$

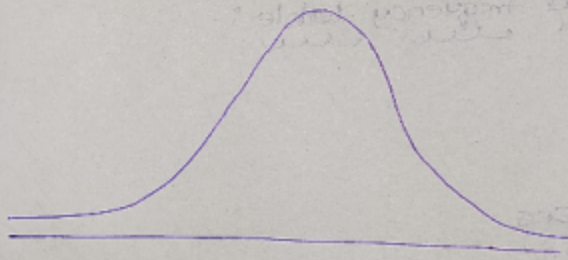
Z score $Z = \frac{x - \bar{x}}{S}$

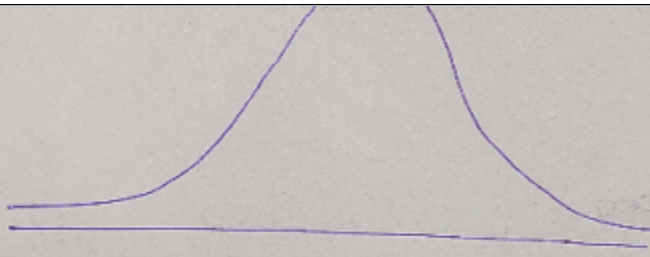
$$= \frac{10.8 - 15}{2.5}$$

$$= -1.68$$

mean = balance point

Bell shaped distribution :-





recode original scores into z-scores



Standardization



replace the original scores by
standard deviations from
the mean.

Measures of Central tendency

- 1) Mode → The one value which lies repetitively
- 2) Median → Middle value in the order of low to high
- 3) Mean → $\bar{x} = \frac{\sum x}{n}$

Measures of Dispersion :-