



# Welcome to AP Stats!

Mr. Lowber  
2020-21

# What Is Statistics?

Statistics is the study of ***data***. It is a branch of mathematics that deals with how to gather, organize, and interpret data.

The two major branches of statistics are:

- 1) Descriptive statistics
- 2) Inferential statistics

# What Is Statistics?

We will study four major themes this year:

- Collecting Data - Surveys, Studies, and Experiments
- Describing Data - Graphical and Numerical Analysis
- Probability - The Study of Chance Behavior
- Inference - Making Conclusions Based on Data

# The AP Exam

- We will prepare for the AP Statistics Exam taking place on Thursday, May 13, 2021 @ 12:00 pm.
- 3 hours – Part 1: 40 Multiple Choice Questions,  
Part 2: 5 Free-Response Questions, and  
1 “Investigative Task” (simply a longer FRQ)
- You CAN be successful on this exam **IF** you put forth the effort ALL YEAR LONG.
- I will provide you with LOTS of preparation materials, as well as practice for the exam.
- **You will need to provide the effort...**

# Passage Rates

**2019 Score Distributions: Math & Computer Science**

Exam	5	4	3	2	1
AP Calculus AB	18.9%	18.8%	20.6%	23.4%	18.3%
AP Calculus BC	43.2%	18.5%	19.8%	13.6%	4.9%
AP Computer Science A	27%	22.1%	20.8%	11.8%	18.3%
AP Computer Science Principles	13.6%	21.1%	38%	19%	8.3%
AP Statistics	14.5%	18%	26.7%	19.7%	21.1%
AP Statistics (2018)	14.1%	21.3%	25.2%	16.1%	23.3%

Pop. mean  
 $\mu = 2.78$

**Students form Mr. L's Stats Classes  
 (Last 3 Years)**

**13.3%**

**27.4%**

**37.7%**

**14.1%**

**7.5%**

2017  
 $\bar{x} = 3.16$

2018  
 $\bar{x} = 3.20$

2019  
 $\bar{x} = 3.35$

# What do you Need?

- You will need the following items for this course:
  - Graphing Calculator - Required (*TI-84/84+ recommended*)
  - Notebook - 2 or 3 subject, college-ruled
  - Binder - 1.5" for tables, handouts, notes, etc.
  - Pencil, pen, highlighter
  - Strong work ethic and a willingness to ask for help!

# What should you already know?

Algebra 2 Topics:

❖ **P**                      **Permutations**

❖ **C**                      **Combinations**

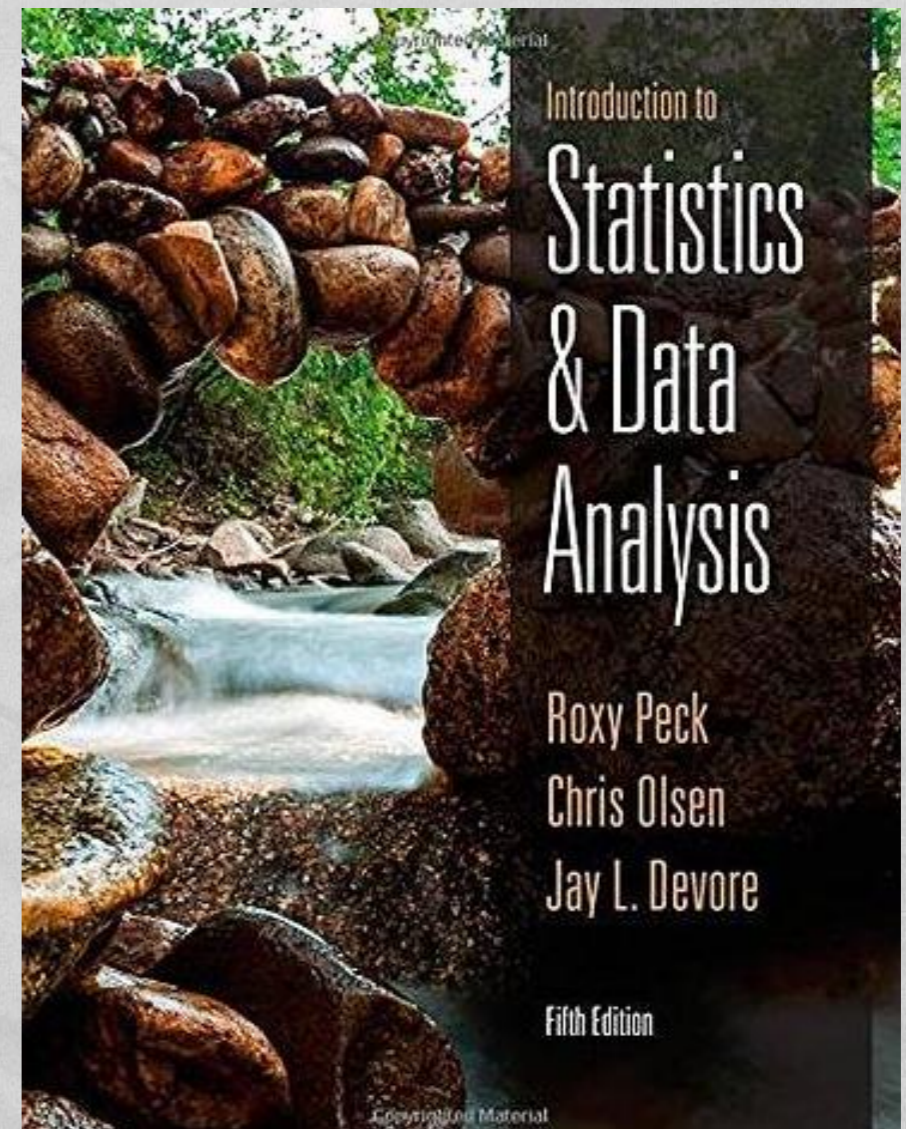
❖ **Pr**                    **Probability**                       $\rightarrow P(A|B)$

❖ **B.T.**                **Binomial Theorem**

*used to quickly solve*  $\rightarrow (x - 3)^5$

# Your Textbook

- *Statistics & Data Analysis, 5<sup>th</sup> Ed.* by Peck, Olsen, & Devore
  - Read It
  - Study It
  - Use It
  - Take Care of It - Cover It!
  - Bring it every day...



# CLASSROOM RULES

- BE ON TIME
- BE PREPARED
- NO FOOD or DRINKS\* - *when we return to school*  
(\*Exception: Water bottles w/ cap)
- BE RESPECTFUL OTHERS AND THEIR PROPERTY
- BE POSITIVE AND DO YOUR BEST

# Syllabus-Expectations

- My goal is for you to understand Statistics and how it plays a role in your current and future life.
- My hope is you will be successful in the course and earn a passing score on the AP Exam.
- My expectation is that you will put forth the effort necessary to be successful in a college-level course.

# Course Website

Mr. Lowber's Class Website:

- <http://chrislowber1.wixsite.com/dumath>
- Notes, Handouts, etc.
- Resources, Applets, Links

# Finish your summer reading?

- ❑ Let's test your knowledge and understanding of Chapters 1 & 2
- ❑ HW #1: Article on Dyscalculia (link on My webpage)
- ❑ **Quiz time! Next Tuesday on Chapters 1 & 2!**

# HW #1: Read Article & Answer questions

## Counting on Dyscalculia

By John Allen Paulos | Tuesday, March 01, 199x taken from DISCOVER Magazine

Health statistics may be hazardous to our mental health. Inundated by numbers purporting to predict everything from our likelihood of dying from cancer to our chances of contracting

AIDS, we respond with alleged risk. We ignore accept dubious conclusions misinterpret the number 88.47 percent of us have 452,888,988,750 cases

Part of the problem lies hazards with anything mathematical; it stems third is factual: if we do possibly know what the

### AP Stats 2017-18

Name: \_\_\_\_\_ Block: \_\_\_\_\_

## HW #1: Questions on *Counting on Dyscalculia*

By John Allen Paulos, taken from DISCOVER Magazine in March, 199x

Please answer the following questions:

- 1) What are the three common causes of the problem for misinterpreting statistics that are cited by the author?
- 2) The author states that we have a preference for remembering statistics that are nice round numbers, typically ones that are multiples of what?
- 3) What aspect is most critical about a random sample?
- 4) Are these two phrases the same (meaning are they equally likely): (1) probability that

Due on Fri, Aug 28<sup>th</sup>

# Course Website

 <http://chrislowber1.wixsite.com/dumath>

## Points of Interest

- Monthly Calendar
- Notes, handouts, links
- AP EXAM Prep
- Resources



The screenshot shows the homepage of the 'du Math' and 'du Fun' website. At the top, there are two logos: 'du Math' with an orange circle icon and 'du Fun' with a black circle icon. Below the logos is a navigation bar with buttons for HOME, AP Stats, Honors Algebra 2, ACT/EOC Prep, Class Protocols, RESOURCES, and More. The main content area features a 'Welcome Back to School' graphic with a notepad and pencil, a '2020-21 School Calendar' link, and a link to the 'AP STATS SYLLABUS' which is circled in blue. To the right, there is a section titled 'Who's ahead in the national polls?' showing a line graph of Biden (49.9%) and Trump (42.1%) from March 2020 to August. At the bottom, there is a red banner with the text 'After School HELP: In Rm 232-A' and 'THE SOLUTION TO YOUR Mathematical dilemmas!'.

**du Math** **du Fun**

HOME AP Stats Honors Algebra 2 ACT/EOC Prep Class Protocols RESOURCES More

Welcome Back to School

2020-21 School Calendar

ALGEBRA 2 SYLLABUS

AP STATS SYLLABUS →

**Who's ahead in the national polls?**  
An updating average of 2020 presidential general election polls, accounting for each poll's quality, sample size and recency

70%  
60%  
50%  
40%  
30%

MAR. 2020 APRIL MAY JUNE JULY AUG.

AUG. 7 LEADER  
Biden  
+7.8

Biden 49.9%  
Trump 42.1%

After School HELP:  
In Rm 232-A

THE SOLUTION TO YOUR  
Mathematical dilemmas!

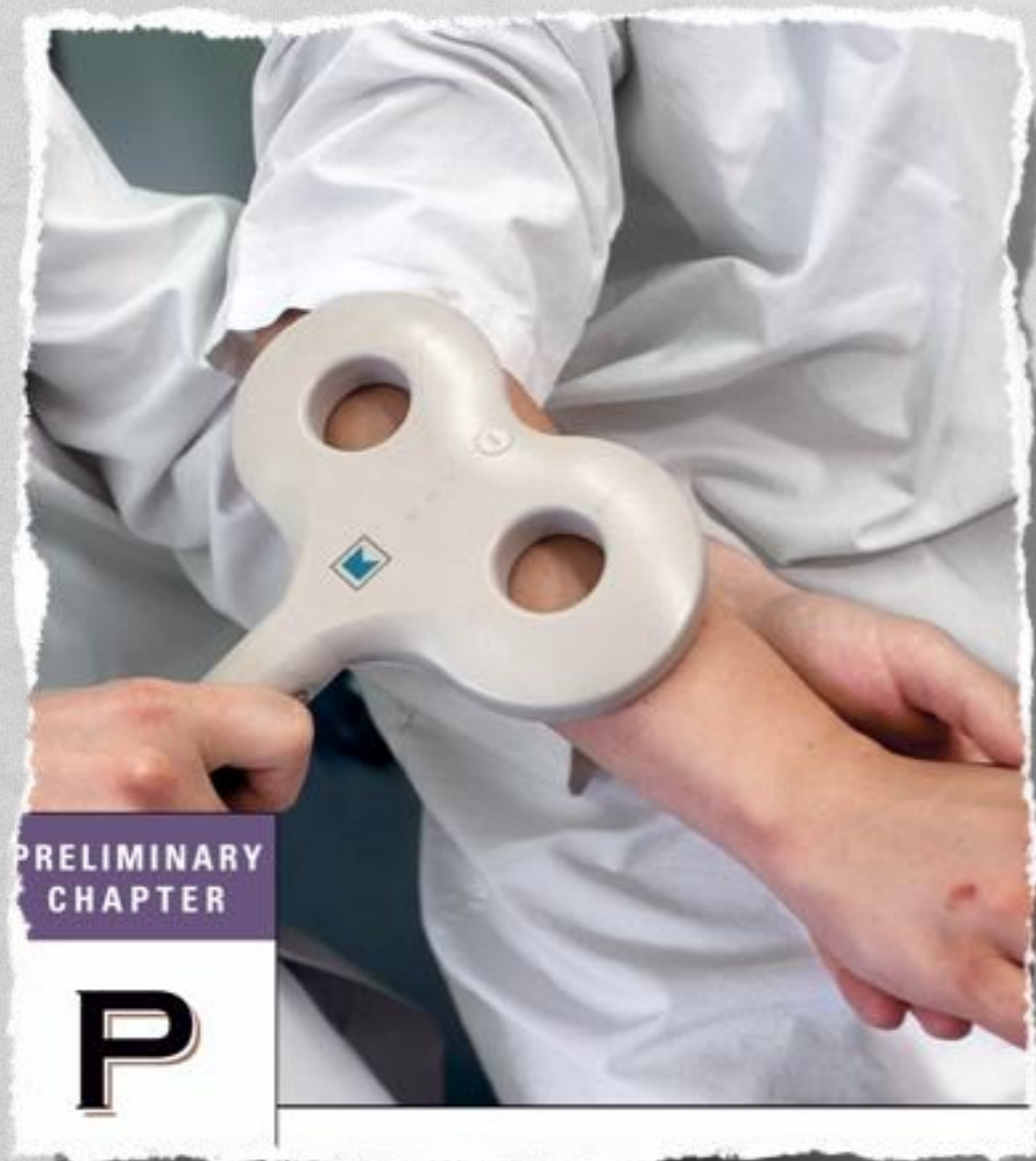
# Who needs statistics?

*Listen to a current mathematics professor*



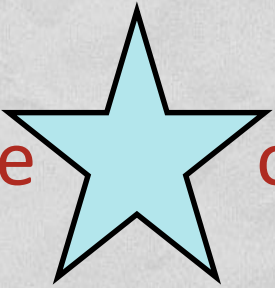
<https://www.youtube.com/watch?v=BhMKmovNjvc>

# Homework



- Explore the website
- Read the article & answer questions; Review Chapters 1 & 2
- See you next class 😊!

# Next Class: Birthday STARS

On the front of the card (the side with the  on it):

- Write your First & Last name
- Write your birthday
- Decorate your cards