

Welcome to
IB MATH
Studies

Mr. Cedarlund 😊

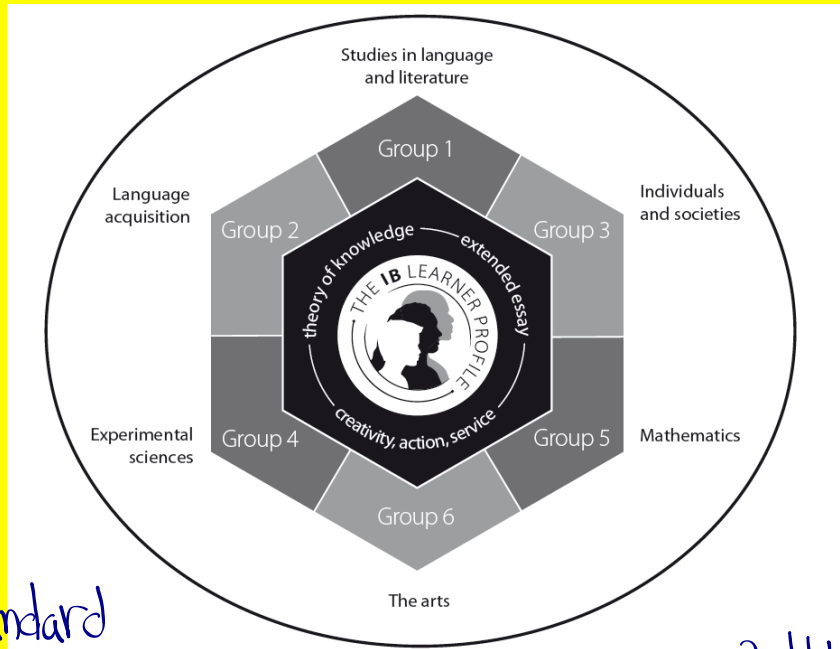
Let me know if
I pronounce your name
incorrectly.

A little about this class.

Some of the Syllabus

Course Objectives:

The primary purpose of this single trimester class is to learn the content associated with the IB Math Studies curriculum and prepare you for the *IB Mathematical Studies SL* exams given in **May 2020**.



3 Standard Level

3 HL

Grade 11 and 12 students trying for an *IB Math Studies Certificate* or the full *IB Diploma* this year will take your exam in **May 2020**. These students should plan on attending review sessions in April just prior to the exams.

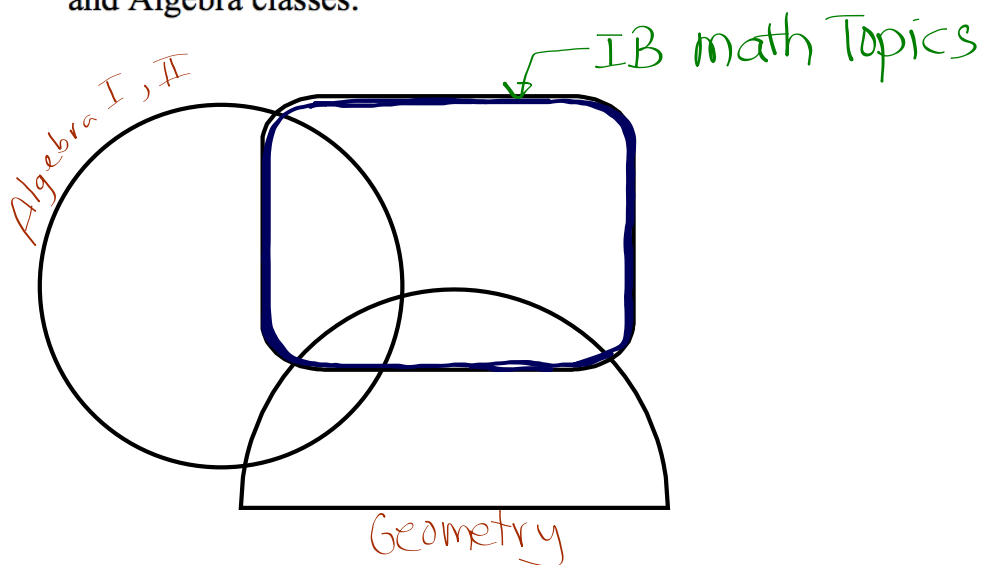
Any IB student earning a score of 5, 6, or 7 will receive college credit for Math 105 at all Oregon universities. Credit for other colleges varies. The breakdown in scoring for the **IB Math Studies Score** is as follows:

80% Exams in May
20% IB Math Project (done in this class)

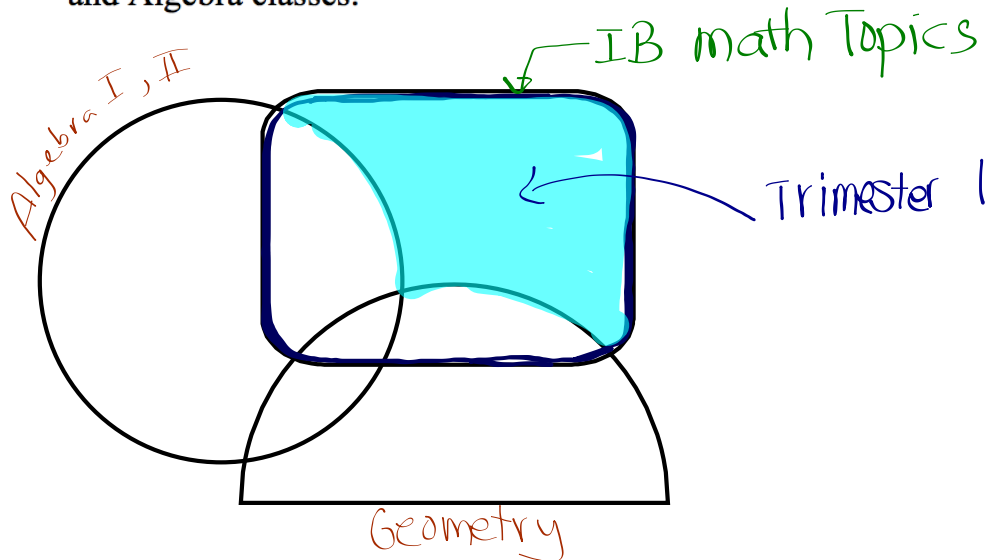
| Syllabus component |
|---|
| All topics are compulsory. Students must study all the sub-topics in each of the topics in the syllabus as listed in the <i>Mathematical studies SL guide</i> . Students are also required to be familiar with the topics listed as prior learning. |
| Topic 1—Number and algebra |
| Topic 2—Descriptive statistics |
| Topic 3—Logic, sets and probability |
| Topic 4—Statistical applications |
| Topic 5—Geometry and trigonometry |
| Topic 6—Mathematical models |
| Topic 7—Introduction to differential calculus |

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In this class, you will also prepare an IB Math project, called the *Internal Assessment*, that will contribute to your overall *IB Math Studies SL exam scores*. *Since the curriculum will be changing after this year, freshman or sophomores should not be enrolled in the course this year.*


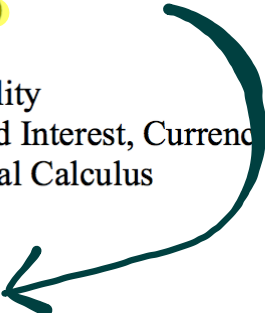
Course Description/Content:

Since the Internal Assessment requires a lot of statistics, that content will be covered first.

- 
1. Descriptive Statistics including Normal Distribution.
 2. Two variable Statistics (*including Correlation, LSRL, Chi-Square Test of Independence*)
 3. Numerical Trigonometry
 4. Sets/Venn Diagrams/Probability
 5. Sequences, Series, Compound Interest, Currency Exchange
 6. Introductory/Basic Differential Calculus
 7. Logic
 8. IB Math **Exam** Preparation
 9. IB Math **Project** Preparation

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- 

Important Dates

Oct. 1 7:00 pm

IB Junior Information Night @ 4J Ed Center

Oct 15th

IB Registration forms & fees due

All students in this course are also scheduled
into

IB {

Pre-Calc A in Trimester 2

a.k.a **College Now Algebra-Math 111**

and

Pre-Calc B in Trimester 3

a.k.a. **Math 112 - College Now Trigonometry**

In order to qualify to take the IB Math Studies Exam at Sheldon you must complete this course and at least Pre-Calc A (same as College Now Algebra-Math 111). *All students in this course should be already scheduled into Pre-Calc A in Trimester 2 and possibly Pre-Calc B in Trimester 3 (same as College Now Trigonometry -Math 112).*

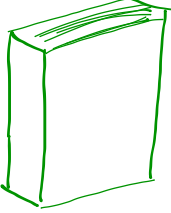
You should definitely take Pre-Calc B if you plan to take Calculus sometime in your future or if there is a possibility of you will end up in a STEM major in college. *There is a fee to take the IB Math Studies Exam.*

Materials Required

✓ Textbooks and Materials

- *Mathematical Studies SL (Haese & Harris Publications)*
- *Handouts given in class*
- *Access to Google Docs and Google Sheets*
- *IB Reference Sheets and Documents*

Soft cover
Textbook



Matches IB
curriculum
2007-2012

For some topics
differences are
large

ch. 6

ch. 10

ch. 11

so we use
packets

- ✓ **Graphing Calculator:** TI-83, TI-84, or a TI-Enspire with a TI-84 insert. If you don't use one of these calculators, please check in with Mr. Cedarlund. Not all graphing calculators are allowed on IB exams but the ones listed above are acceptable. Calculator apps on electronic devices can be used outside of class but not in class nor on IB exams.

✓ **Notebook/Organization:** For each unit you will use a combination of notes you take and notes I provide. What probably works best is a three-ring binder with four sections:

1. **IB reference sheets**
2. **Unit Notes/Classwork** – *which allow for your own notes to be imbedded next to handouts*
3. **Current Unit homework**, kept in chronological order. (*or use separate spiral for HW*)
4. **IB Project documents** (*or a completely separate folder might work best*)

IB^{math} Formula Sheet
IB^{math} Terminology

} Always have
with you
in class, etc

- ✓ **Type of paper:** You can get by with mostly ordinary binder paper.
- ✓ **Color Correcting pens, Pencils and erasers, straightedge for graphs**

Be sure to read page 3 and 4 of the syllabus on your own.

**The seats you have are only
for the next day or two**












**Fill out the seating
preference form**

First Last Name
 Per__

Rows _____
 Pods of 3 to 4

*Sit near front? Other?
(please no requests to sit by certain people)*

.....

| | | |
|---|--|--|
|  Rows |  Pods of 3 to 4 | Strong preference for rows |
|  Rows |  Pods of 3 to 4 | Slight preference for rows |
|  Rows |   Pods of 3 to 4 | I'm flexible |
|  Rows |  Pods of 3 to 4 | Slight preference for Pods |
|  Rows |  Pods of 3 to 4 | Strong preference for Pods |

Questions ?

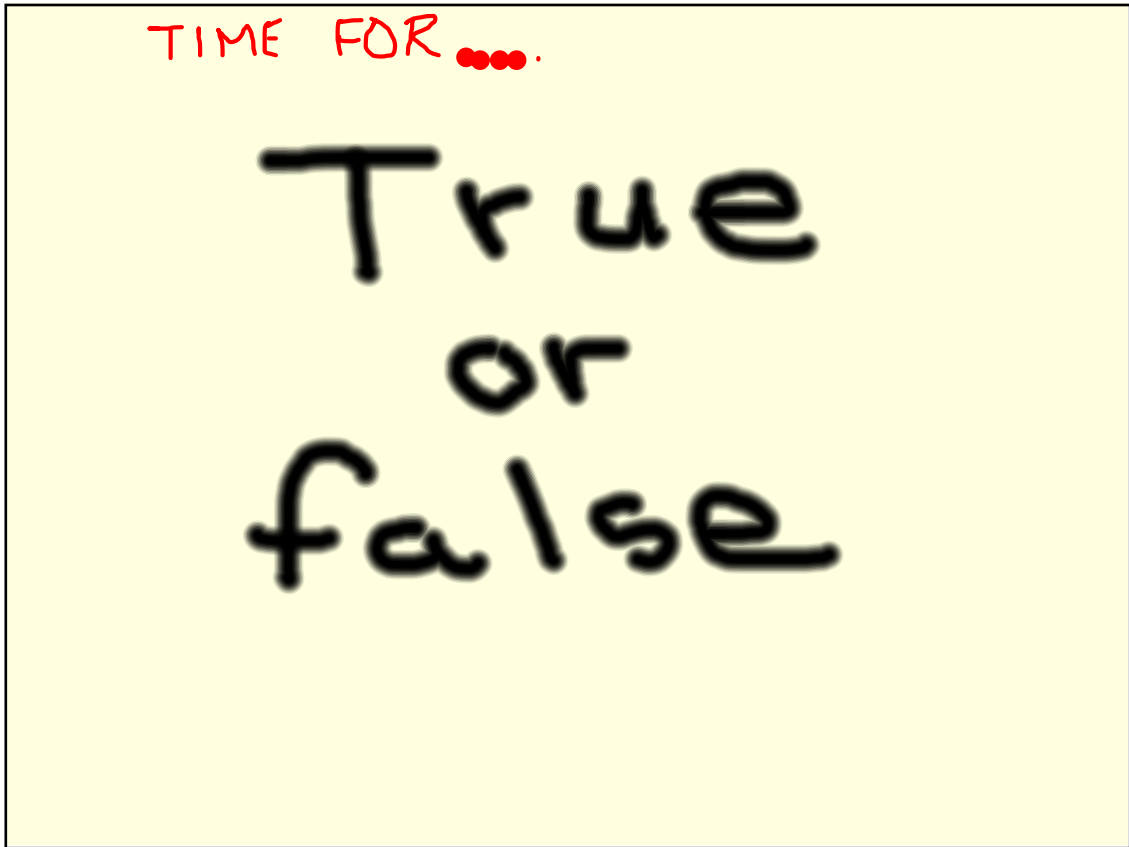
Let's get to
know each other










Things to Know About Me

Taught some form of IB Math Studies
for 15 years

- two years at the American School
of Warsaw, a full IB school in Poland.

- 14 years at Sheldon HS



| | | | | |
|---|---|---|--|---|
|  |  |  |  |  |
| <p>Stacy Keach - IMDb imdb.com</p> | <p>Stacy Keach List of Movie... tvguide.com</p> | <p>Stacy Keach Posters and P... moviestore.com</p> | <p>Stacy Keach - The Movie Databas... themovieb.org</p> | <p>Stacy Keach - Wikipedia en.wikipedia.org</p> |
|  |  |  |  | |
| <p>Stacy Keach - Movies, Pho...</p> | <p>Stacy Keach - MovieActors.com</p> | <p>Stacy Keach - Wikipedia</p> | <p>Stacy Keach - MovieActors.com</p> | |



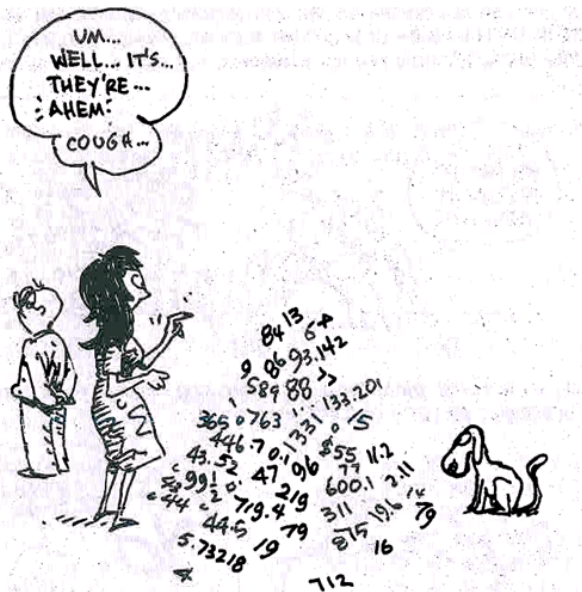
Your turn

- Each will create 4 statements about yourself
- *some true, some false*
- When everyone is ready in your group, go around one at a time and tell everyone your statements.
- **Have them guess T or F**

What is
Statistics?

A look to Sweden

DATA DESCRIPTION

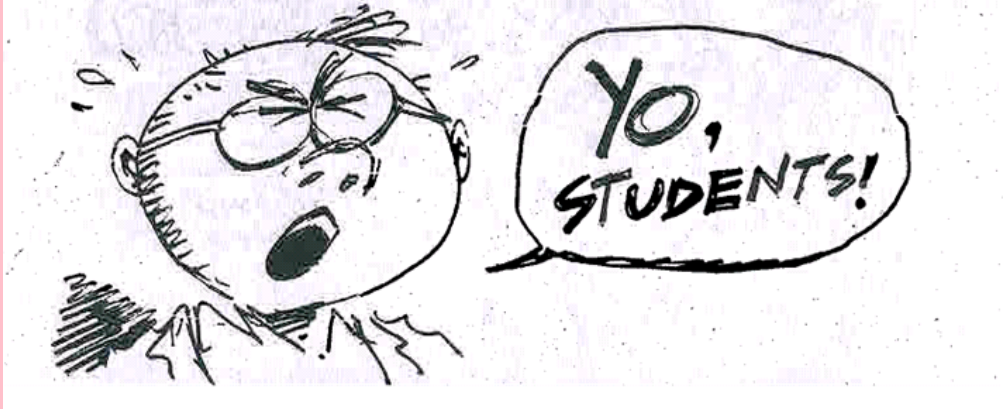


But there are many types of data.

You will learn about those types on your first assignment which due Friday.



WELL, TO DESCRIBE DATA, THE FIRST THING YOU NEED IS SOME ACTUAL DATA TO DESCRIBE... SO LET'S COLLECT SOME DATA!



An Activity

What is your social media of choice?



1. In your group, make a list of social media apps that students might use.
2. Which app do you think will be the favorite of all the students in the class? What percent of the class do you think will choose that app?
3. Now let's collect the class data and record it in a frequency and relative frequency table.



1. In your group, make a list of social media apps that students might use.
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4. Now we'll create a bar chart and a pie graph. Go to stapplet.com/ Then select [1 Categorical Variable, Single Group](#)

5. Sketch the bar chart below.

6. Sketch the pie graph below.

7. What is the difference between the bar chart and the pie graph?

Summary: Displaying Categorical Data

Bar Charts and **Pie Charts**:

Bar Charts:

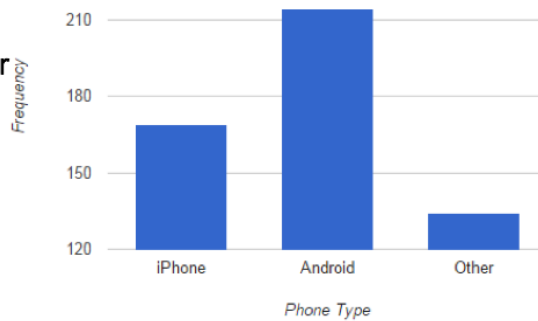
Pie Charts

Which cell phone speaks to you?

The Pew Research Center asked a random sample of 517 18-34 year olds what type of phone they use

| | | |
|----------------------|--------------|------------|
| | iPhone | 169 |
| Type of Phone | Android | 214 |
| | Other | 134 |
| | Total | 517 |

1. The center released the following bar graph. What is misleading it?



2. Make a relative frequency bar chart of the table to display the distribution of type of phone among the 517 18-34 year olds in the sample.

| | | |
|--------------------------|--------------|------------|
| | iPhone | 169 |
| Type of Phone | Android | 214 |
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| | Total | 517 |

3. Use your relative frequencies to sketch a pie graph for the data.

Assignment #1:

A two day assignment

*Should be finished before class this Friday, but try to do
Parts 1 and 2 tonight.*

Follow the instructions on the handout.

You'll need the Ch. 6 Packet

THE CARTOON GUIDE TO STATISTICS

LARRY GONICK
& WOOLLCOTT SMITH



