# Agenda today
after checking HW

- Discuss Tuesday's TEST
- Review Questions
- Prepare to learn about your Project (IA)

LCQ

# Agenda Monday

- ✓ Go over review question
- ✓ Do one or two more
- ✓ Project Overview

Pick Up
the Green HW
Solutions

(I'll go over the back side)

| A | B | C | D | E |
|---|---|---|---|---|
| COUNTRY | MATERNAL MORTALITY RATE (DEATHS/100,000 LIVE BIRTHS) | Frequency | f * x | f*(x-101.34)^2 |
| Afghanistan | 396 | 5 | 1980 | 434122.578 |
| Albania | 29 | 2 | 58 | 10466.1512 |
| Algeria | 140 | 5 | 700 | 7472.978 |
| Angola | 477 | 9 | 4293 | 1270083.92 |
| Argentina | 52 | 2 | 104 | 4868.8712 |
| Armenia | 25 | 3 | 75 | 17483.3868 |

| | | | | |
|---|---|---|---|---|
| Central Afric | 882 | 5 | 4410 | 3047150.178 |
| Chad | 856 | 6 | 5136 | 3417070.294 |
| Chile | 22 | 7 | 154 | 44063.8492 |
| | x | f | f * x | f*(x-101.34)^2 |
| | Sum of the frequency | 352 | | |
| | Sum of f*x | | 35672 | |
| | | Mean | 101.34 | |
| | Sum f(x-x)^2 | | | 11784795.09 |
| | | | Standard Deviation | 182.974128 |

$$\sigma = \sqrt{\frac{\sum f(x_i - \bar{x})^2}{\sum f}}$$

You must calculate the mean, $\bar{x}$, ahead of time

# Warm Up

(also green)

- includes 2 questions on IB topics not covered in depth in this class (from Geo + Alg 2)

In a particular week, the number of eggs laid by each hen on a farm was counted. The results are summarized in the following table.

1

| Number of eggs | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Frequency | 4 | 7 | 12 | 10 | 14 | 13 |

(a) State whether these data are discrete or continuous. [1]

(b) Write down

(i) the number of hens on the farm;

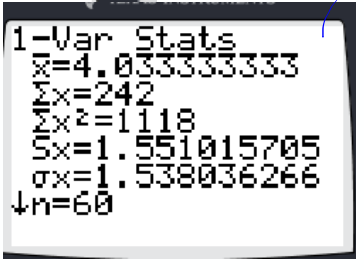
(ii) the modal number of eggs laid. [2]

(c) Calculate

(i) the mean number of eggs laid;

(ii) the standard deviation. [3]

a


$\bar{X} = \frac{\sum fx}{\sum f}$

$= \frac{242}{60} = 4.03$ eggs

b

$S = \sqrt{\frac{141.934}{60}} = 1.54$ eggs

(2) FUNCTIONS (miscellaneous topic in IB Math)

Consider the functions $f(x) = x + 1$ and $g(x) = 3^x - 2$.

(a) Write down

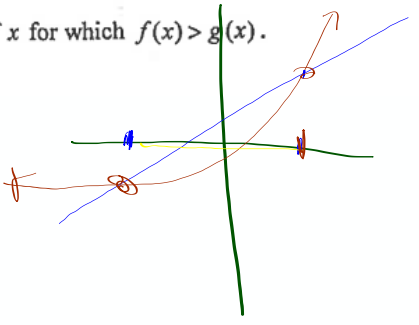
(i) the $x$-intercept of the graph of $y = f(x)$; $(-1, 0)$

(ii) the $y$-intercept of the graph of $y = g(x)$. $(0, -1)$ [2]

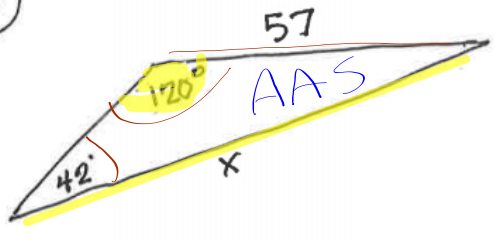
(b) Solve $f(x) = g(x)$. ← can do with GDC $x = 1.34$ $x = -2.96$ [2]

(c) Write down the interval for the values of $x$ for which $f(x) > g(x)$. [2]

$-2.96 < x < 1.34$



(3)




find x

Law of Sines

$\frac{\sin(42^\circ)}{57} = \frac{\sin(120^\circ)}{x}$

$x = \frac{57 \sin(120^\circ)}{\sin(42^\circ)}$

$\approx 73.8$ feet

Law of Cosines
SAS SSS

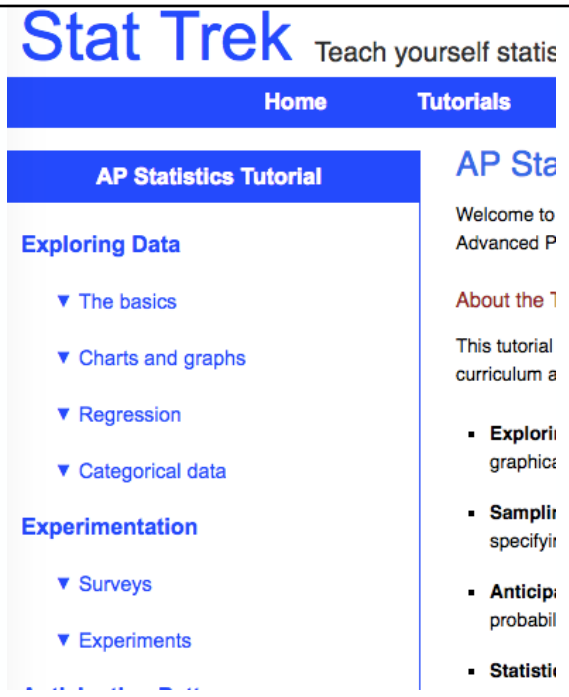
Law of Sines
AAS ASA SSA
~~SAA~~

All triangles

Test is Tuesday

List of Aims

Preparing for your Project




**Experimentation**

▲ Surveys

- Data collection ✓
- Sampling methods ✓✓✓
- Bias in surveys ✓

Watch the 3 videos

LCQ

✓ GDC

✓ formula sheet

Assignment

1 page 206...

Review Set A: 3, 6, 8

Review Set B: 1-3, 5

2 Stat Trek Website (instructions and link on my website)

1
14

**AND**

Go back to the Stat Trek Website. Study:

- Planning a Study
- Surveys
  - Data collection
  - Sampling methods
  - Bias in surveys