

ONLINE REVIEW CHAT: IB BIOLOGY HL 1

Monday, September 28, 2009

TOPIC: STATISTICS

Present: Natalie, Alex, Kris, Nick and Sam

7:32:12 PM **MsChien**: KRIS: invite all the kids in our class if you see them

7:32:40 PM **MsChien**: invite all the kids in our class if you see them

7:32:48 PM **MsChien**: WELCOME! This is our online study session. It will be copy and pasted later to be published on ms-----.com for your viewing later. SO: (1) keep it clean and respectful, because I can use anything you say against you later :-D (2) ask questions and help ANSWER questions (3) We will have only one hour, so make it good. Any individual issues should be addressed before or after the chat.

7:32:55 PM **MsChien**: HOW THIS WORKS: Ms----- will ask a question, and you should answer. You dont have to "raise your hand" or anything, just answer. She will let everyone know who got the problem correct or not. After this, you can ask a related question, and someone (or folks) in the group can then answer.

7:33:08 PM **MsChien**: I'll be repeating that until a good amount comes in

7:33:50 PM **Natalie -----**: Alright.

7:34:18 PM **MsChien**: where is everyone geez

7:35:21 PM **MsChien**: 5 more minutes and im gonna start anyways

7:35:43 PM **MsChien**: invite all the kids in our class if you see them

7:36:02 PM **Natalie -----**: Practically nobody is online lol

7:36:30 PM **MsChien**: you dont see anyone from your side?

7:36:58 PM **Kris -----**: I called Alex -----

7:37:04 PM **Natalie -----**: No, I don't see anybody that's in biology.

7:37:05 PM **MsChien**: goooood

7:39:00 PM **MsChien**: ok, i think you guys will be the LUCKKKKYYYYY ones to see some of the questions one test

7:39:40 PM **MsChien**: remind me to give you a glow stick on Wednesday

7:40:08 PM **Natalie -----**: good im glad. is the test really lonf?

7:40:08 PM **Natalie -----**: long**

7:40:15 PM **MsChien**: of course

7:40:43 PM **Alex -----**: BOOOOM

7:40:57 PM **Alex -----**: Blink182Angels, really?

7:41:04 PM **Natalie -----**: okay!

7:41:08 PM **Natalie -----**: s-----t up lol

7:41:11 PM **MsChien**: WELCOME! This is our online study session. It will be copy and pasted later to be published on ms-----.com for your viewing later. SO: (1) keep it clean and respectful, because I can use anything you say against you later :-D (2) ask questions and help ANSWER questions (3) We will have only one hour, so make it good. Any individual issues should be addressed before or after the chat.

7:41:17 PM **MsChien**: HOW THIS WORKS: Ms----- will ask a question, and you should answer. You dont have to "raise your hand" or anything, just answer. She will let everyone know who got the problem correct or not. After this, you can ask a related question, and someone (or folks) in the group can then answer.

7:41:29 PM **MsChien**: Alex, remind me to give you three a glow stick on Wednesday

7:41:35 PM Alex -----: Oh I will.

7:41:48 PM MsChien: DO NOT eat, drink or stick the glow stick

7:41:55 PM MsChien: anywhere inappropriate

7:41:59 PM Alex -----: Can I inject it directly into my bloodstream?

7:42:07 PM MsChien: only during your own time

7:42:11 PM Alex -----: Aight cool.

7:42:14 PM MsChien: that means after 2

7:42:15 PM MsChien: 3

7:42:16 PM MsChien: 3333

7:42:30 PM Natalie -----: hahaha

7:42:42 PM MsChien: OKAY LETS BEGIN

7:42:47 PM MsChien: FIRST QUESTION

7:42:53 PM MsChien: ***What is the purpose of using standard deviation in measuring the length of fish tails in relation to its change with different water pH?***

7:43:43 PM Alex -----: It is used to see how close the results are clustered around the mean. It would help show how consistent the fish tails were in the experiment.

7:43:55 PM MsChien: ALEX - CORRECT!

7:43:59 PM Alex -----: BOOOOOM!

7:44:01 PM MsChien: ANYONE HAS ANYTHING ELSE TO ADD

7:44:04 PM MsChien: OR ASK

7:44:20 PM Natalie -----: the purpose of using standard deviation in measuing the lenght of fish tails in relation to its change with different water ph is it allows us to see if there is a cluster around the average of data.

7:44:29 PM MsChien: OK GOOD NAT

7:44:37 PM Alex -----: Nat haha.

7:44:50 PM MsChien: OK AL

7:44:56 PM Natalie -----: Al haha.

7:45:03 PM MsChien: NEXT QUESTION

7:45:18 PM MsChien: ***What is the significance of the mean MEAN?***

7:45:42 PM Alex -----: The mean mean?

7:45:52 PM MsChien: HMMM

7:46:02 PM Natalie -----: the mean gives you one number as answer for the average.

7:46:09 PM MsChien: REWORD: What is the significance of using the mean?

7:46:15 PM MsChien: NAT GOOD

7:46:17 PM Alex -----: It shows the average.

7:46:21 PM Alex -----: Add em up and dividem

7:46:26 PM MsChien: WHATS THE SIGNIFICANCE OF THAT THOUGH?

7:46:29 PM Natalie -----: instead of comparing multiple sets of data you have one number to show for it.

7:46:32 PM MsChien: WHAT IS IT IMPORTANT

7:46:35 PM MsChien: NAT GOOD

7:46:59 PM Alex -----: SAM LEHRMAN

7:47:03 PM Sam Lehrman: Hi

7:47:14 PM MsChien: FOR SAM: WELCOME! This is our online study session. It will be copy and pasted later to be published on ms-----.com for your viewing later. SO: (1) keep it clean and respectful, because I can use anything you say against you later :-D (2) ask questions and help ANSWER questions (3) We will have only one hour, so make it good. Any individual issues should be addressed before or after the chat.

HOW THIS WORKS: Ms----- will ask a question, and you should answer. You dont have to "raise your hand" or anything, just answer. She will let everyone know who got the problem correct or not. After this, you can ask a related question, and someone (or folks) in the group can then answer.

7:47:23 PM MsChien: ***READY FOR THE NEXT QUESTION????????????????????***

7:47:27 PM Kris -----: Yes

7:47:28 PM Alex -----: OHHH YEAH

7:47:29 PM Sam Lehrman: yes

7:47:40 PM Natalie -----: yes.

7:47:49 PM MsChien: ***How is calculating mean alone NOT an effective way of analyzing data?***

7:48:01 PM Alex -----: It doesn't show the spread of data.

7:48:16 PM Alex -----: So you wouldn't know if it's inconsistent.

7:48:16 PM Kris -----: You can't see the out landers.

7:48:16 PM Natalie -----: mean only gives you the average but doesn't all ow you to see the accuracy of it.

7:48:27 PM MsChien: KRIS: EXCELLENT

7:48:32 PM Alex -----: Outliers.

7:48:39 PM Alex -----: Not Out landers.

7:48:45 PM Alex -----: Stupid.. head....

7:48:52 PM MsChien: WELL, MAYBE JUST IN THAT CORNER OF THE ROOM

7:48:57 PM MsChien: NAT YES,

7:49:03 PM Kris -----: Alex is in that corner?

7:49:03 PM MsChien: BUT DONT FORGET TO TALK ABOUT OUTLIERS

7:49:19 PM Alex -----: Outliers are numbers that lay outwards.

7:49:24 PM Sam Lehrman: haham outlanders

7:49:26 PM MsChien: KRIS: HE TRIES TO DEVIATE, BUT CANT SEEM TO LEAVE YOU GUYS

7:49:39 PM MsChien: NEXT QUESTION????????????????????***

7:49:42 PM Sam Lehrman: yes

7:49:44 PM Kris -----: Oh yes

7:49:48 PM Natalie -----: yeahh

7:49:49 PM MsChien: ***What does it mean when the data in your experiment is insignificant?***

7:50:00 PM Alex -----: The data is some how inconclusive.

7:50:02 PM Natalie -----: that means there is no real data.

7:50:07 PM Alex -----: Sike?

7:50:12 PM MsChien: NAT: WHAT DO YOU MEAN "REAL DATA"

7:50:13 PM Sam Lehrman: It cant be used in scientific experimentation

7:50:14 PM MsChien: SIKE????????????????

7:50:19 PM MsChien: SAM: WHY?

7:50:35 PM Alex -----: The data is not reliable due to the insufficient

7:50:36 PM Alex -----: Things.

7:50:45 PM Alex -----: Too many outliers

7:50:49 PM Alex -----: NICK -----

7:50:49 PM Kris -----: Nick -----!

7:50:55 PM NICK -----: Why hello there folks.

7:50:57 PM MsChien: FOR NICKWELCOME! This is our online study session. It will be copy and pasted later to be published on ms-----.com for your viewing later. SO: (1) keep it clean and respectful, because I can use anything you say against you later :-D (2) ask questions and help ANSWER questions (3) We will have only one hour, so make it good. Any individual issues should

be addressed before or after the chat.

HOW THIS WORKS: Ms----- will ask a question, and you should answer. You dont have to "raise your hand" or anything, just answer. She will let everyone know who got the problem correct or not. After this, you can ask a related question, and someone (or folks) in the group can then answer.

7:51:12 PM MsChien: ONLY THE FIRST FIVE IN HERE WILL GET THE GLOW STICKS ON WEDNESDAY

7:51:19 PM NICK -----: Now let's settle down and learn some bio

7:51:30 PM NICK -----: So I get glow sticks?

7:51:31 PM Alex -----: That's us.

7:51:34 PM NICK -----: d00d noice.

7:51:50 PM MsChien: YES

7:52:15 PM MsChien: ANSWER THE PREVIOUS QUESTION USING PERCENTAGES AS AN EXAMPLE

7:52:27 PM MsChien: ***What does it mean when the data in your experiment is insignificant?*** <-- QUESTION WE ARE ON

7:52:51 PM Alex -----: If there is only one type of data, like percentages, you can't conclude anything due to the lack of data.

7:52:52 PM NICK -----: I like crew.

7:53:04 PM NICK -----: Wrong chat. Im sorry

7:53:10 PM MsChien: NICK, THIS IS NOT A DATING CHAT

7:53:30 PM MsChien: ALEX: NEED MORE

7:53:33 PM Natalie -----: The percentages show how confident the numbers are and what's due to randomized chance. ?

7:53:42 PM MsChien: NAT: GOOD!

7:53:48 PM NICK -----: Good nat!

7:54:05 PM Alex -----: What is a T chart thing

7:54:08 PM MsChien: SO HOW DOES INSIGNIFICANT DATA LOOK LIKE IN PERCENTAES?

7:54:15 PM Alex -----: Not chart, but I wasn't there for the thing

7:54:31 PM Natalie -----: you mean t test?

7:54:33 PM Alex -----: Yeah

7:55:06 PM NICK -----: I would like a question of my own Ms. -----

7:55:07 PM MsChien: SOMEONE ANSWER ALEX'S QUESTION

7:55:14 PM Alex -----: Come on guys.

7:55:25 PM MsChien: WHAT IS THE T-TEST?

7:55:33 PM Sam Lehrman: im not sure

7:56:11 PM MsChien: WHAT IS THE PURPOSE OF THE T-TEST????

7:56:37 PM Natalie -----: the t test compares the averages and standard deviations of the data to see if there is significance

7:56:37 PM Kris -----: Something with degrees of freedom.

7:57:12 PM MsChien: NAT: EXCELLENET!

7:57:28 PM MsChien: ALEX: I HAVE THE POWERPOINT I USED, DO YOU WANT IT?

7:57:31 PM Natalie -----: and you have to work out the degree of freedom to figure that out $df=n_1+n_2-2$

7:57:32 PM Alex -----: Yeah.

7:57:41 PM MsChien: SO WHEN I GIVE YOU THE FILE, ACCEPT IT

7:57:44 PM Alex -----: Yup

7:57:45 PM MsChien: NAT: YEP!

7:57:49 PM Kris -----: Hax!!
7:58:01 PM Alex -----: It's failing.
7:58:06 PM MsChien: WHAT IS YOUR EMAIL?
7:58:20 PM MsChien: OK LET'S MOVE ON WITH THE NEXT QUESTION
7:58:29 PM Sam Lehrman: lets
7:58:30 PM Kris -----: Alex-----TheProfessionalJobMan@gmail.com
7:58:34 PM Alex -----: ^
7:58:41 PM MsChien: ***What is a null hypothesis? Why are they necessary?***
7:59:00 PM Alex -----: Null hypothesis are hypothesis are the opposite of your hypothesis.
7:59:12 PM MsChien: ALEX ITS SENE
7:59:14 PM MsChien: SENT
7:59:22 PM Alex -----: Nice
7:59:34 PM MsChien: ALEX: NEED TO BE MUCH MORE DETAILED WITH YOUR ANSWER
7:59:36 PM Alex -----: So like, if your hypothesis is wrong, your Null is probably right.
7:59:40 PM Alex -----: Umm
7:59:42 PM Alex -----: Uhh
7:59:50 PM Kris -----: or the data is inconclusive
7:59:57 PM MsChien: KRIS-- YES
8:00:09 PM Alex -----: That has nothing to do with Null Hypothesis.
8:00:09 PM NICK -----: Kris, on the ball buddy!
8:00:21 PM MsChien: THE NULL HYPOTHESIS USUALLY SAY THAT YOUR DATA IS INSIGNIFICANT
8:00:25 PM MsChien: OR THERE IS NO DIFFERENCE
8:00:29 PM Alex -----: :O
8:00:37 PM MsChien: NICK - PARTICIPATE :-P
8:00:44 PM NICK -----: I'm sorry ma'am.
8:01:00 PM NICK -----: Hit me up with a question
8:01:05 PM MsChien: NEXT QUESTION
8:01:09 PM NICK -----: Ill answer
8:01:14 PM MsChien: ***Connect these two ideas: CHANCE and SIGNIFICANCE***
8:01:24 PM Alex -----: Oh man.
8:01:36 PM Natalie -----: Data may be due to chance if there is no significance
8:01:47 PM MsChien: NAT: GOOOOOOOOOOOOOOOOOOOOD!
8:01:49 PM Sam Lehrman: ah beat me to it
8:01:55 PM NICK -----: If the degree of chance is too high...
8:01:57 PM Natalie -----: :-)
8:02:01 PM NICK -----: I was c-----ggin'
8:02:18 PM MsChien: NICK: UNDERAGE DRINKING IS ILLEGAL
8:02:25 PM Alex -----: JHAHAHA
8:02:30 PM MsChien: AND FINISH YOUR THOUGH ON CHANCE
8:02:44 PM MsChien: THOUGHT
8:02:52 PM Alex -----: I think he went to the bathroom
8:02:53 PM Sam Lehrman: Nick just called me his mom is screaming at him
8:02:55 PM Sam Lehrman: sorry
8:03:04 PM MsChien: WHAT DID HE DO?
8:03:11 PM Sam Lehrman: I have no clue
8:03:14 PM MsChien: OK NEXT QUESTION
8:03:21 PM NICK -----: Wait
8:03:23 PM NICK -----: I can do this!

8:03:24 PM Kris -----: Maybe she didn't approve of his c-----ggin
8:03:28 PM NICK -----: The data is inconclusive!
8:03:34 PM MsChien: GOOD NICK
8:03:35 PM MsChien: GOOD
8:03:37 PM NICK -----: thank you
8:03:40 PM Alex -----: WHOO
8:03:42 PM Alex -----: BOOOOOM!
8:03:42 PM NICK -----: WHOOO
8:03:46 PM NICK -----: c-----ggin
8:03:52 PM Alex -----: Brewski's.
8:03:52 PM MsChien: IF YOUR MOM NEEDS CONFIRMATION THAT YOU ARE STUDYING ONLINE WITH ME, SHE CAN EMAIL ME
8:04:23 PM MsChien: YOU WILL VISIT FAIL-SKI IF YOU EVEN THINK ABOUT DRINKING
8:04:32 PM MsChien:
Connect these two ideas: CHANCE and T-TEST
8:04:51 PM Alex -----: With a high amount of chance, your T-test will be high?
8:05:04 PM Alex -----: Like it will come out bad.
8:05:05 PM Alex -----: Or something
8:05:05 PM MsChien: ALEX, NO
8:05:07 PM Alex -----: DAMN
8:05:09 PM Alex -----: DARN*
8:05:10 PM NICK -----: Ouch
8:05:12 PM Kris -----: The T-test can tell you if your data is due to chance.
8:05:16 PM MsChien: ALEX; CHECK OUT THE PP
8:05:20 PM Alex -----: On it
8:05:22 PM MsChien: KRIS: GOOD
8:05:23 PM Natalie -----: The t test will show how significant your data is and the higher the significance the less the data is due to randomized chance
8:05:36 PM MsChien: GOOOD
8:05:41 PM NICK -----: She is so darn smart
8:05:49 PM MsChien: WHAT DOES THE T-VALUE NEED TO BE IN ORDER FOR THE DATA TO BE SIGNIFICANT????
8:05:58 PM Alex -----: Below 1?
8:06:09 PM MsChien: ALEX, NO THAT IS STANDARD DEVIATION
8:06:15 PM Alex -----: Aww mabn
8:06:21 PM Alex -----: Equal to the other thing
8:06:24 PM Alex -----: Or higher
8:06:28 PM Natalie -----: the t value needs to be greater than the critical value
8:06:34 PM MsChien: HIGHER THAN THE CRITICAL VALUE
8:06:44 PM Sam Lehrman: critical value not other thing alex
8:06:52 PM MsChien: T NEEDS TO BE HIGHER THAN THE CRITICAL VALUE IN ORDER FOR YOUR DATA TO BE SIGNIFICANT
8:06:57 PM MsChien: HOW DOES ONE GET THE CRITICAL VALUE?
8:06:58 PM Alex -----: Aight
8:07:08 PM Natalie -----: thats what i said lol
8:07:11 PM Sam Lehrman: on the chart?
8:07:17 PM MsChien: SAM: GOOD
8:07:21 PM NICK -----: Wait let's slow this bad boy down, I'm lost

8:07:27 PM MsChien: WHAT TWO THINGS DO YOU NEED TO FIND THE CRITICAL VALUE?
8:07:35 PM Alex -----: T-Chart?
8:07:43 PM NICK -----: Degree of freedom?
8:07:45 PM MsChien: NICK YES
8:07:46 PM Sam Lehrman: degree of freedom?
8:07:46 PM Alex -----: Degree of freedom?
8:07:48 PM Natalie -----: wait, but how do you find it?
8:07:51 PM NICK -----: YEAH!
8:07:52 PM NICK -----: BOOM
8:07:59 PM MsChien: NAT: YOU TOLD US EARLIER!
8:08:08 PM NICK -----: Get it together nat
8:08:11 PM Alex -----: Bro.
8:08:15 PM MsChien: $N_1 + N_2 - 2 = DF$
8:08:20 PM Alex -----: What does that mean?
8:08:30 PM MsChien: SOMEONE TELL ALEX
8:08:30 PM NICK -----: Isn't is obvious
8:08:30 PM Natalie -----: ohhhh its the same as the degree of freedom? thats the same thing?
8:08:34 PM MsChien: YES
8:08:40 PM Natalie -----: oh ok.
8:08:40 PM MsChien: $N = \text{NUMBER OF}$ _____
8:08:43 PM NICK -----: I think i get it now
8:08:43 PM Alex -----: What is that formula doing.
8:08:53 PM NICK -----: Degrees
8:08:59 PM NICK -----: Wrong chat
8:09:00 PM Natalie -----: number in the first trial
8:09:28 PM MsChien: THE DEGREE OF FREEDOM (DF) HELPS STAT TESTS TO CONSIDER THE NUMBER OF TRIALS OR SUBJECTS IN AN EXPERIMENT
8:09:32 PM MsChien: NAT-- YEP!!!!!!!!!!!!!!
8:09:49 PM MsChien: OK - WHAT IS THE OTHER THING YOU NEED TO KNOW IN ORDER TO FIND THE CRITICAL VALUE ON THE T-CHART?????
8:09:56 PM Alex -----: .5
8:10:06 PM Sam Lehrman: mass
8:10:08 PM MsChien: YES, AND WHAT DOES THAT NUMBER REPRESENT
8:10:12 PM MsChien: MASS??
8:10:14 PM Alex -----: What is the number represent
8:10:16 PM Alex -----: ?
8:10:17 PM Natalie -----: isnt it the confidence limit?
8:10:25 PM MsChien: NAT: YES!
8:10:27 PM NICK -----: I want some of whatever nat's havin'
8:10:27 PM Natalie -----: but what is the confidence limit?
8:10:31 PM Alex -----: I dunno what that is.
8:10:43 PM Natalie -----: coffee
8:10:52 PM Alex -----: Umm.
8:10:53 PM MsChien: CONFIDENCE LIMIT - IS THE % OF TIME WE WANT TO BE SURE
8:10:55 PM NICK -----: ;D
8:10:58 PM Alex -----: .5
8:11:02 PM Kris -----: This chat conflicts with Heroes
8:11:08 PM Alex -----: We only want to be sure .5?

8:11:13 PM NICK -----: And heroes conflicts with this chat

8:11:16 PM MsChien: SO IF WE SELECT A CONFIDENCE LIMIT (P) OF 0.5, THAT MEANS WE WANT TO BE 95% SURE OF OUR DATA

8:11:20 PM Alex -----: Alright

8:11:21 PM Alex -----: Nice

8:11:24 PM MsChien: KRIS: TIVO!

8:11:34 PM NICK -----: G'dem'

8:11:37 PM Alex -----: Gettum.

8:11:40 PM MsChien: WE ALWAYS PICK 0.5, THATS THE LEVEL OF CONFIDENCE WE NEED TO HAVE IN OUR DATA

8:11:41 PM Natalie -----: how do you get it though?

8:11:42 PM Sam Lehrman: get them

8:11:47 PM MsChien: NAT: ITS A GIVEN

8:11:51 PM Alex -----: So why is there a chart, if we always want .5?

8:11:51 PM MsChien: SOME TESTS ARE HIGHER

8:11:58 PM MsChien: BUT FOR HIGHS CHOOOL, P=0.5 IS GOOD

8:12:03 PM Alex -----: Alright.

8:12:08 PM NICK -----: Gotcha

8:12:11 PM Alex -----: Bro.

8:12:13 PM Sam Lehrman: OK

8:12:19 PM MsChien: ALEX: THEORITICALLY, YOU CAN CUT MOST OF THE CHART SO THAT YOU CAN ONLY HAVE THE 0.5 COLUMN

8:12:20 PM NICK -----: 10-4

8:12:28 PM MsChien: BUT I DON'T PLAN ON MEMORIZING ALL THE CRITICAL VALUES

8:12:30 PM Alex -----: Yeah, so it's more like a T-Line.

8:12:34 PM MsChien: YES

8:12:38 PM Natalie -----: not .05 just .5

8:12:39 PM MsChien: GOOD OBSERVATION

8:12:44 PM Alex -----: .05?

8:13:00 PM MsChien: P=0.05 MEANS ITS AT 95% CONFIDENCE LIMIT

8:13:09 PM Alex -----: So it's .05 not .5?

8:13:15 PM MsChien: NAT: MY BAD

8:13:15 PM Natalie -----: i dont undersand what that means

8:13:23 PM MsChien: ITS ALWAYS 0.05

8:13:24 PM Sam Lehrman: its cool

8:13:26 PM Alex -----: Like

8:13:31 PM Natalie -----: im confused!!

8:13:31 PM NICK -----: I agree with Sam

8:13:32 PM Alex -----: We want to be right 95% of the time

8:14:00 PM MsChien: NAT: P=0.05 MEANS, THAT 95% OF THE DATA IS SIGNIFICANT, 5% IS DUE TO CHANCE

8:14:10 PM MsChien: THATS WHAT WE WANT IN ALL OUR DATA IN IB

8:14:21 PM Alex -----: Aight coo.

8:14:26 PM Sam Lehrman: ib

8:14:32 PM Natalie -----: okay, i understand.

8:14:43 PM MsChien: IF ITS P=0.5, THAT'S 50% OF THE DATA IS SIGNFIIFCANT, AND 50% IS DUE TO CHANCE, WHICH IS NOT GOOD

8:14:44 PM NICK -----: International Bacheloreate

8:14:53 PM MsChien: OK GOOD
8:14:53 PM Alex -----: .5 is bad.
8:15:03 PM MsChien: $P=.80$ GOOD OR BAD?
8:15:06 PM Alex -----: BAD
8:15:08 PM Alex -----: BADDDD
8:15:13 PM MsChien: ALEX CORRECT
8:15:16 PM Alex -----: BOOOOOOM
8:15:22 PM NICK -----: Pew Pew
8:15:31 PM MsChien: HOW MUCH OF $P=0.80$ IS ACTUALLY SIGNIFICANT?
8:15:38 PM Natalie -----: does that mean 20% is significant
8:15:46 PM MsChien: NAT: YES!
8:15:58 PM Natalie -----: okayy i understand.
8:16:07 PM Alex -----: Yup.
8:16:09 PM MsChien: ***If Chris' hypothesis is this: Drinking Pepsi before an exam will help students get higher scores. What would be the null?***
8:16:12 PM NICK -----: What day of the mod rotation is tomorrow
8:16:19 PM Alex -----: It wouldn't effect your scores.
8:16:24 PM MsChien: E
8:16:31 PM NICK -----: Thanks
8:16:36 PM MsChien: ALEX: YES.... THE DATA WOULD HAVE NO DIFFERENCE
8:16:36 PM Natalie -----: Drinking pepsi before an exam will have no effect onn test scores
8:16:43 PM MsChien: NAT: GOOD
8:16:43 PM Alex -----: Who beat you to it.
8:16:47 PM Alex -----: I did.
8:16:48 PM NICK -----: Alex ----- did
8:16:55 PM Natalie -----: lol
8:16:55 PM Kris -----: Yeah he did
8:17:05 PM MsChien: ***What is the role of establishing ranges in data?***
8:17:05 PM NICK -----: Well I have to go eat dinner, be back in 10
8:17:06 PM Sam Lehrman: indeed
8:17:13 PM MsChien: BYE NICK
8:17:24 PM Natalie -----: to show the variation of data
8:17:25 PM Alex -----: Helps show the spread of data.
8:17:32 PM MsChien: NAT AND ALEX: EXCELLENT
8:17:43 PM MsChien: ***Why are graphs necessary in scientific communication?***
8:17:59 PM Sam Lehrman: It helps to visually rep. the data
8:18:05 PM MsChien: SAM GOOD
8:18:08 PM Natalie -----: you can create n error bar
8:18:11 PM Natalie -----: an*
8:18:18 PM MsChien: NAT, AND HOW IS THAT IMPORTANT?
8:18:29 PM Alex -----: Shows how consistent the data is.
8:18:34 PM MsChien: ALEX: GOOD
8:19:05 PM MsChien: ***Kareen wants to compare the test scores of two Regents Bio classes. Which statistical test should she use?***
8:19:09 PM MsChien: THATS A HARD ONE
8:19:18 PM Sam Lehrman: T-Test
8:19:22 PM Alex -----: Means.
8:19:29 PM MsChien: SAM AND ALEX, ALL GOOD

8:19:39 PM Sam Lehrman: YEEEEEEEEEEEEEEEEAAAAAAAAAAAAAAAAHHHHHHHHHHHHHHH
8:19:40 PM MsChien: WHAT ABOUT THIS ONE: ***Kris wants to determine the amount of students participating in IB Bio versus Design tech. What type of statistical test(s) should he use?***
8:19:57 PM Alex -----: I can't answer this question because Bio is so much better than design tech.
8:20:04 PM Natalie -----: standard deviation
8:20:04 PM Alex -----: and has a way better teacher.
8:20:05 PM Sam Lehrman: oh you
8:20:21 PM MsChien: ALEX, HOW DOES THAT ANSWER EVEN MAKE ANY SENSE
8:20:35 PM Alex -----: Just sayin'.
8:20:42 PM Alex -----: A graph?
8:20:44 PM Kris -----: I can guarantee I would never do any sort of research that associated me with the barbarians that take DT.
8:20:55 PM MsChien: <-- KNOWS SECRETS ABOUT EVERYONE BECAUSE SHE TALKED TO MS.FIGEUR
8:20:56 PM Alex -----: Mongrels.
8:21:06 PM Alex -----: Tell her that I miss her :-D
8:21:10 PM MsChien: ANSWER THE QUESTION! ***Kris wants to determine the amount of students participating in IB Bio versus Design tech. What type of statistical test(s) should he use?***
8:21:17 PM Alex -----: Graphs.
8:21:25 PM MsChien: THATS NOT A TEST
8:21:26 PM Natalie -----: standard deviation
8:21:29 PM MsChien: THATS ONE
8:21:41 PM Alex -----: Range?
8:21:44 PM MsChien: THATS ANOTHER
8:21:51 PM Kris -----: Mean
8:21:52 PM MsChien: ITS A TEST WE JUST DID
8:21:56 PM MsChien: THATS ANOTHER
8:21:58 PM Alex -----: T?
8:22:07 PM MsChien: ALEX, THATS NOT THE LATEST TEST WE DID
8:22:13 PM Natalie -----: i have a question, do we have to list all of them if we're asked this the test or just one?
8:22:21 PM Natalie -----: on*
8:22:22 PM MsChien: NAT: YES
8:22:27 PM Alex -----: Eating skittles?
8:22:32 PM MsChien: ALEX, NO
8:22:42 PM Kris -----: M&Ms?
8:22:42 PM MsChien: WE LEARNED TWO MAJOR TESTS, ONE OF WHICH WE LEARNED ON FRIDAY
8:22:47 PM MsChien: WITH SKITTLES
8:22:49 PM Alex -----: Umm
8:22:53 PM Natalie -----: t test?
8:22:58 PM Natalie -----: i wasn't there on friday.
8:23:01 PM Alex -----: I was
8:23:05 PM Alex -----: But I was too busy eating skittles.
8:23:06 PM Kris -----: I'll grab my mochila.
8:23:14 PM MsChien: THE CHI-SQUARE TEST
8:23:17 PM Alex -----: CHI SQUARE

8:23:19 PM Alex -----: Awww
8:23:19 PM Sam Lehrman: ohhh
8:23:21 PM Natalie -----: what is that?
8:23:22 PM Alex -----: Tip of my tongue.
8:23:38 PM MsChien: AND WHEN WOULD ONE USE THE CHI-SQAURE????
8:24:16 PM MsChien: ??????
8:24:17 PM Alex -----: I forgot about the chi square
8:24:24 PM Natalie -----: i dont know what it is
8:24:29 PM Sam Lehrman: when eating skittles?
8:24:37 PM MsChien: T - TEST: WE USE IT WHEN THERE IS MEASURABLE DATA (HEIGHT, PH, WEIGHT, ETC)
8:24:57 PM Alex -----: Chi Square is when?
8:24:58 PM MsChien: CHI-SQAURE: WE USE IT WHEN THE DATA INVOLVES COUNTING (NUMBER OF STUDENTS, NUMBER OF FROGS, NUMBER OF SEEDS)
8:25:02 PM Alex -----: Alright
8:25:13 PM Alex -----: Got it.
8:25:51 PM MsChien: ***Cause or correlation: Gravity keeps Ms----- from flying across the room.***
8:25:59 PM Alex -----: Correlation
8:26:21 PM MsChien: ITS CAUSE
8:26:22 PM Alex -----: Darn
8:26:30 PM MsChien: WHY?
8:26:31 PM Alex -----: Because
8:26:37 PM Alex -----: it causes you to stay on the ground
8:26:40 PM MsChien: YES
8:26:45 PM MsChien: ***Cause or correlation: Cocktail drugs has a higher chance of addressing the symptoms in AIDS***
8:26:46 PM Natalie -----: is i like cause and effect?
8:26:54 PM MsChien: NAT: YES
8:26:57 PM Natalie -----: correlation
8:26:58 PM Kris -----: correlation
8:27:00 PM MsChien: NAT: YES
8:27:02 PM MsChien: WHY????
8:27:02 PM Alex -----: Correlation
8:27:09 PM Kris -----: because there is no reason
8:27:12 PM Alex -----: Because it doesn't directly effect it?
8:27:23 PM MsChien: KRIS, GIVE ME MORE DETAILS
8:27:26 PM Natalie -----: because its a statement
8:27:28 PM MsChien: ALEX YES
8:27:39 PM MsChien: NAT: BUT SO WAS THE GRAVITY ONE
8:27:50 PM MsChien: WHATS THE DIFFERENCE BETWEEN CAUSE AND CORRELATION
8:27:51 PM MsChien: ?????
8:27:53 PM Alex -----: Higher?
8:27:57 PM Alex -----: The word higher
8:28:07 PM MsChien: ALEX: WHAT?
8:28:10 PM Alex -----: Like
8:28:16 PM MsChien: WHATS THE DIFFERENCE BETWEEN CAUSE AND CORRELATION
8:28:22 PM Alex -----: Hmm

8:29:04 PM MsChien: HELLLLO

8:29:04 PM Natalie -----: is it that cause has a reason to why whatever is occurring

8:29:14 PM Alex -----: Like

8:29:14 PM Kris -----: Cause is something that's because of something else. Correlation is just things that go together.

8:29:21 PM MsChien: NAT: YES...

8:29:24 PM MsChien: KRIS YES

8:29:31 PM Sam Lehrman: look ms -----

8:29:38 PM Sam Lehrman: i really like your reveiw

8:29:41 PM Sam Lehrman: ill be back

8:29:46 PM Sam Lehrman: but i have to go

8:29:55 PM MsChien: CORRELATION HAS NO SEEMINGLY DIRECT RELATIONSHIP, AND NEEDS EXPERIMENTAL PROOF TO BE A CAUSATION

8:29:59 PM MsChien: SAM: OKIE DOKIES!

8:30:08 PM Sam Lehrman: Good bye

8:30:10 PM MsChien: SAM: 8 PM TOMORROW

8:30:16 PM Alex -----: So it needs to be proven?

8:30:22 PM MsChien: YES

8:30:24 PM MsChien: TRUE

8:30:27 PM Alex -----: and Cause is already proved?

8:30:35 PM Alex -----: Or common knowledge?

8:30:40 PM MsChien: YES, THE RELATIONSHIP IS SOLID

8:30:48 PM Alex -----: Aight

8:31:21 PM MsChien: ONE MORE QUESTION

8:31:28 PM Alex -----: Shoot.

8:31:40 PM MsChien: ***How are standard deviation and ranges expressed in a graph? How are they different?***

8:31:57 PM Alex -----: They both are expressed as error bars.

8:31:59 PM Alex -----: But

8:32:13 PM MsChien: ALEX: GOOD... BUT?

8:32:27 PM Alex -----: The Standard deviations doesn't show the exact highest and lowest where as the Range one does

8:32:44 PM MsChien: ALEX: IMPRESSIVE

8:32:44 PM Alex -----: But the Standard deviation one is shows the total spread of the data better

8:32:53 PM MsChien: GOOD

8:32:54 PM MsChien: GOOD

8:32:55 PM Alex -----: So both have their ups and downs.

8:33:00 PM MsChien: ALEX: GOOD

8:33:19 PM MsChien: YOU ARE OFFICIALLY A -----YTE

8:33:23 PM Alex -----: NICE

8:33:29 PM Alex -----: NAT'S NOT HAHA

8:33:29 PM Natalie -----: what's that lol

8:33:31 PM Alex -----: HAHAHA

8:33:33 PM Alex -----: Like an Acolyte

8:33:35 PM Kris -----: I'm jealous.

8:33:37 PM Alex -----: but a -----yte.

8:33:51 PM Kris -----: Or a DS lyte.

8:34:12 PM MsChien: THEY ARE STUDENTS WHO ARE WEIRD AND SMART AND ARE

GUARANTEED TO BECOME ONE OF THE FOLLOWING: DOCTOR, LAWYER, MAD SCIENTIST, OR JUST PLAIN RICH

8:34:21 PM Alex -----: BOOOOOOOOM

8:34:27 PM Alex -----: <----

8:34:41 PM NICK -----: Im back

8:34:54 PM MsChien: NICK, WE ARE ABOUT TO END IT!

8:34:56 PM NICK -----: My mom gave me spoiled milk, and it was not pleasant

8:35:04 PM Alex -----: Nice

8:35:04 PM MsChien: NICK

8:35:08 PM NICK -----: Ms -----

8:35:12 PM MsChien: I GOT A LINK FOR YOU AND YOUR MOM

8:35:16 PM NICK -----: cool

8:35:18 PM NICK -----: Send it

8:35:46 PM MsChien: WHAT DID YOU SAY THEY WERE MADE OUT OF????

8:35:54 PM Alex -----: What?

8:36:08 PM MsChien: GLOW STICKS

8:36:15 PM Alex -----: Death?

8:36:16 PM MsChien: WHAT DID YOU SAY GLOW STICKS ARE MADE OUT OF?

8:36:25 PM Alex -----: Heroine?

8:36:26 PM NICK -----: Glass, and light

8:36:31 PM Kris -----: Tinkerbell's blood.

8:36:33 PM NICK -----: and magic

8:36:38 PM Alex -----: Magick.

8:36:38 PM MsChien: NICK: SO BOTH YOU AND YOUR MOM ARE WRONG

8:36:43 PM MsChien: <http://science.howstuffworks.com/light-stick1.htm>

8:36:58 PM NICK -----: My mom isnt very well educated

8:36:59 PM MsChien: 1. The hydrogen peroxide oxidizes the phenyl oxalate ester, resulting in a chemical called phenol and an unstable peroxyacid ester.

2. The unstable peroxyacid ester decomposes, resulting in additional phenol and a cyclic peroxy compound.

3. The cyclic peroxy compound decomposes to carbon dioxide.

4. This decomposition releases energy to the dye.

5. The electrons in the dye atoms jump to a higher level, then fall back down, releasing energy in the form of light.

8:37:06 PM Alex -----: Oh baby.

8:37:08 PM MsChien: I HAVE THAT IN WRITING NOW

8:37:23 PM MsChien: IM GONNA SAVE THIS FOR REVENGE PURPOSES

8:37:28 PM NICK -----: Oh lord :S

8:38:05 PM MsChien: NICK: WE ARE GOING TO END THIS CHAT NOW, BUT IM GONNA SAVE THIS CHAT AND POST IT ON THE CLASS WEBSITE SO YOU CAN SEE WHAT YOU MISSED

8:38:11 PM MsChien: OR YOU CAN SIMPLY SCROLL BACK

8:38:17 PM NICK -----: Much abliged

8:38:18 PM MsChien: OR YOU CAN ALSO JOING TOMORROW NIGHT'S REVIEW

8:38:27 PM NICK -----: I'll be there

8:38:31 PM MsChien: 8 PM

8:38:39 PM MsChien: NAT AND KRIS AND SAM CAN ALSO COME

8:38:41 PM NICK -----: Same old song and dance

8:38:43 PM Alex -----: But you know.

8:38:45 PM MsChien: MORE PRACTICE THE BETTER

8:38:47 PM Alex -----: I don't even need to.

8:38:49 PM Natalie -----: ill be there

8:38:55 PM NICK -----: Well thank god!

8:38:59 PM NICK -----: Natalie will be there

8:39:01 PM Alex -----: I'll be there anyway, cause I am a good -----yte.

8:39:17 PM MsChien: YOU TRULY ARE

8:39:30 PM Natalie -----: oh geez.