

## Evaluation of Investigating the Height of a Stack of Cookies

CHM 1010

Fall 2008

n = 15

1. How would you characterize the use of the "just add data" interactive Excel spreadsheet for this activity? Circle your choice. 3.6 93% no difficulty

very easy	easy	so, so	difficult	very difficult
4	3	7		1

2. Did you happen to notice that the rulers did not have the zero centimeter mark at the end? 33% noticed error

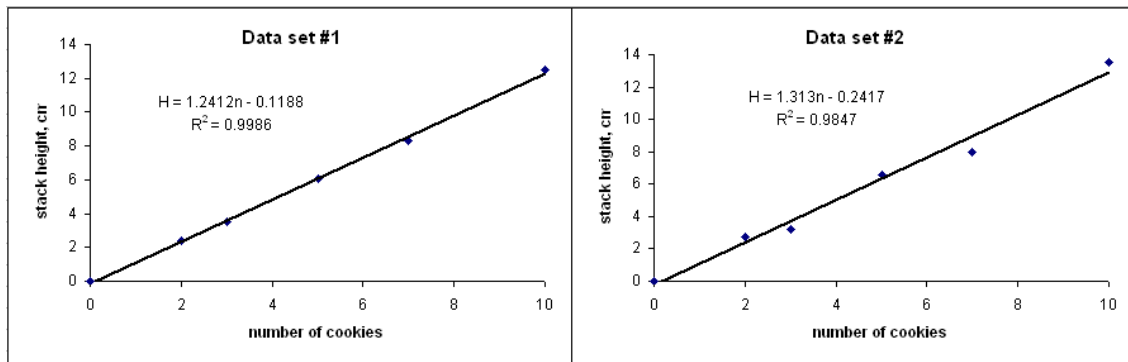
Yes	No
5	10

3. If you did (circled yes in question 2), did you correct for it? Be honest! 80% corrected error

Yes	No
4	1

4. What is the stack height of zero cookies? 0 cm 87% correct  
*They know this but can't translate it to  $y = mx + b$  that  $b = 0$ .*

5. Here are two graphs of different data sets.



Which data set shows more variation in the thickness of the cookies?

Data set #1	Data set #2	Don't know
0	14	1

93% correct

Explain your choice.

11 of 15 (73%) explained it correctly  
 1 of 15 (8%) used  $r^2$  to address correctly

Correct explanation: All comments are typed verbatim including spelling!!!!

- the data points are more scattered in data set 2 than in data set 1
- data set 2 shows more variation in the thickness of the cookies because there is no best fit line that goes thru every point
- The line of best fit is better for data set 1. The regression is closer to 1 than data set 2. Just by looking at the graphs I can see more points above and below the line, meaning more variation.
- Varying the thickness of the cookies makes the graph points to scatter
- variation produced a scattered data with  $r^2$  value
- More point fell out of the line of fitness
- the points in the linear regression do not intercept any points
- In the data set 2 we can see that the points on the graph are not in a linear order; in fact there is no consistency in the variation of the points in data set 2.
- I think its data set 2 because some of the dots are above the line and some are below the dot so that means that the variation in the thickness its bigger than the other graph.
- there are some dots are not on the line or close to the line.
- On data set 2 the data are scattered and divate from the regression equation. On the other hand, all the data in data set 1 are very close to the regression equation.

Incorrect explanation:

- It has a larger slope which represents the thickness of the cookie.
- Because it has the most variation thickness of cookies
- Because it is the line that fit the best.

Any overall comments about the activity:

- relatively easy and fun (cookies; oooooo!)
- It was fairly easy after I read and re-read the questions for clarity, then it became to easy. Thought it had to be more to the activity.
- The activity was ok but the exact answers to the questions on variations and what the intercept should be was difficult to figure out.
- It was interesting exercise, very good in using critical judgement quantities.
- No

- I did not understand the Double Stuf Oreo part! I think the slope would stay constant based on how they are manufactured. But when I brought the Double Stuf Oreo from the store, the measurements were different.
- It was a really fun and easy-to-follow way to learn about variation, data sets, slope and graphing in general. I enjoyed it!
- The questions were sort of confusing. The variation in thickness scroll bar gets frozen at times which makes you close the excel page and start all over again.
- Some of the questions were a little confusing.
- None
- I liked eating the cookies at the end of lab.
- I was a little confused when trying to work in the last part of this assignment.
- no