

Math151 at the University of Tennessee, Knoxville - Chat for August 31, 2015 with the course instructor, Louis Gross.

I will be online starting at 7:30PM and will be happy to answer questions regarding any aspect of the course, assignments, etc. You can type in this document to ask questions - note that you need to be logged into your UTK Google Drive account to be able to type in this.

When you ask a question, please do not use your name because this document will be saved and publicly posted after we close it. I will be on-line at least until 8:30PM but will stay on longer if there are still questions.

I am online now.

Lou

I have a question about HW 3.4d;

$$\bar{X}=2.78$$

$$\bar{Y}=3.92$$

$$S_{xx}=(5.8-2.8)^2+(1.5-2.8)^2+(2.3-2.8)^2+(1-2.8)^2+(3.3-2.8)^2=15.18$$

$$S_{xy}=(5.8-2.8)(8.6-3.92)+(1.5-2.8)(3.9-3.92)+(2.3-2.8)(3.1-3.92)+(1-2.8)(1-3.92)+(3.3-2.8)(5-3.92)=22.87$$

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$$\hat{M}=22.872/15.18=1.51$$

$$3.92=((1.51)(2.78))+b$$

$$B=-.27$$

$$\hat{Y}=1.51(\hat{x})-.27$$

The answer in the book is...

$$\hat{Y}=1.585(\hat{x})+0.487$$

Could you enlighten me?

Give a couple minutes to check this.

Lou

First, the book answer is  $\hat{Y} = 1.585(\hat{x}) - .487$  which is correct. For  $S_{xx}$  I get 14.43 since I am using the  $\bar{x}$  as 2.78 - you have used 2.8 and it makes a little difference. I also get 22.87 for the  $S_{xy}$  as you did. So  $\hat{m}$  is  $22.87/14.43 = 1.58$  as in the text. So  $b = -.485$  as in the text. so the reason you got  $-.27$  for  $b$  is simply because you used 2.8 rather than 2.78 in the calculations. It isn't too far off, but it is sufficiently far off to make a difference.

Lou

I am going off-line. Have great evening.

Lou