

STU22005 Applied Probability II
Continuous Assessment Sheet 3, Answer Sheet

For each question, fill in the following answers. Please use the 'insert text at cursor' option to add your answers (please **do not use** the 'add comment' function to do this).

Save this document and the separate document with your workings, and upload both to Blackboard.

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1.

- a. Give a one sentence answer based on the sketch (that should be in your workings).
The reduction values seem to move in a positive direction as the dose is increased

b. Intercept estimate: 4.541.

Slope estimate: 0.0704.

- c. Slope interpretation: The estimated average reduction in blood pressure increases by 0.0704 for each unit increase in dose

Intercept interpretation: The estimated average reduction in blood pressure is 4.541 when the dose is 0

d. Variance estimate: 2.974.

Variance interpretation: This estimation tells us how accurate the model is at predicting values. The smaller the MSE the better the fit

- e. Are the assumptions reasonable? Yes I believe the assumptions are reasonable. From looking at the plots it seems as though the expected value for the error term is 0, the variance seems to be consistent across the value and the error terms don't seem to be dependent. The QQ plot indicates that the error terms are normally distributed.