Assessment 2B – Week 3 Workbook Exercise
General Linear Modelling

Question	Answer	SAS VA visualisation reference
1. What is the AIC value for the model?	408,433.77	GLM-Poisson Summary Statistics – Fit Statistics
2. How many parameters ended up in the model?	30 [incl the intercept]	GLM-Poisson Summary Statistics – Parameter Estimates <u>or</u> Summary Statistics - Dimensions
3. What is the AIC value for the **GLM-Gamma model?**	332,364.36	GLM-Gamma
4. Which model is selected as the best model?	Linear model [with ASE or SSE as Fit Statistic] GLM-Gamma model [with Observed Average as Fit Statistic]	Model Comparison 1 Summary Statistics – Statistics
5. What is the most important variable for the **Linear 1 model?**	Gift Amount Average 36 Months	Model Comparison 1 Summary Statistics – Variable Importance
6. What is the AIC value for the **GLM-Poisson Log model?**	154,389.71	GLM-Poisson Log Summary Statistics – Fit Statistics
7. What is the MSE value for the **Linear 1 Log model?**	0.197224	Linear 1 Log Summary Statistics – Overall ANOVA
8. Did the most important variables for any model type change?	[Nb, the wording of this question was somewhat ambiguous and open to interpretation.] No; although the order of significance of the predictor variables for the new models was slightly different. For example, *Gift Amount Last* was the 4th most important predictor in the **Linear 1 Log** model, but the 5th most important in the **GLM-Poisson Log** model. [answer should be Linear: No as stayed *Gift Amount Average 36 Months* GLM-Poisson: Yes as changed to *Gift Count 36 Months* from *Gift Amount Average 36 Months*]	Model Comparison 2 Summary Statistics – Variable Importance

9. What is the most important variable for the **Linear 1 Log model?**	Gift Amount Average 36 Months	Model Comparison 2 Summary Statistics – Variable Importance
10. What is the most important variable for the **GLM-Poisson Log model?**	Gift Count 36 Months	Model Comparison 2 Summary Statistics – Variable Importance