Please do this quiz using an R script and submit it via Moodle. All questions should be answered using R. Make sure your code is well-organized by each question, commenting the question numbers. Avoid hardcoding.

**NOTE:** Whenever you need to set a seed, use number 27.

1. For this problem we will be working with the fat data set, which is available in the package faraway. Please inspect this dataset and note that the response is brozek. Do the following:
   1. Create a best subset object called subs for brozek versus all other variables except siri and density. Also store its summary in a variable. **Hint:** There are 15 potential data predictors, not 8.
   2. Find and store in lmod1 the best **simple** linear regression model. What is its adjusted ?
   3. Plot the BIC for each number of data predictors . Also plot the adjusted for each number of data predictors .
   4. How many predictors (, not ) does the best model according to the BIC have? And how many predictors does the best model according to the adjusted have?
   5. Create a linear model for each best model in d). Which of the two seems best to you?
   6. Looking at the two pictures, it appears that going from to is huge, but every difference after that is much smaller. Store the best model with 2+1 predictors; what is its adjusted ? Does it seem worthwhile adding any more predictors after this?
   7. Does the model in f) include the predictor for the best simple linear regression model? Without doing any calculations, do you think the best model with 2+1 predictors in forward stepwise selection would include the predictor for the best simple linear regression model?
   8. Create a forward stepwise selection object for brozek versus all other variables except siri and density. Find the adjusted for the model with 2+1 predictors.