Part 1: Use the Alzheimer's Data (RM_xsect.csv) to complete the work below:

(1) Read data into R for analysis.
(2) Create a factor variables for the following variables. Be sure to include labels for the categories. [hint: use the data dictionary to determine appropriate labels]
    a. CERAD Score (ceradsc)
    b. BRAAK Score (braaksc)
(3) Is there an association between (a) CERAD score and sex and (b) BRAAK score and sex? Compare the results.

(4) Now we will explore the relationship between pathologically determined AD diagnosis (pathoAD) and sex
    a. Is there an association?

    b. Who is more likely to have a pathological diagnosis of AD (pathoAD), men or women?

    c. What is the risk of a pathological diagnosis of AD (pathoAD) for men vs. women (hint: RR (95%CI)? Interpret that measure.

(5) Now let's explore the relationship between clinically determined AD diagnosis (cad) and sex
    a. Is there an association?

    b. Who is more likely to have a clinical diagnosis of AD, men or women?

    c. What is the risk of clinically diagnosed AD for men vs. women (hint: RR (95%CI)? Interpret that measure.

(6) Cad is based on clinical observation of a patient whereas pathoAD is based on looking at the brain post-mortem. Using that information, speculate on the difference in the results in parts 5 and 6.

Part B: Use the Alzheimer's Data (RM_xsect.csv) to complete the work below:

(7) Read data into R for analysis.

(8) Create the following categorical variables (note: the first 2 you created in a previous exercise)
   a. "global_lv" global cognition at last visit.
      i. 1: [min to Q1),
      ii. 2: [Q1 to median),
      iii. 3: [median to Q3),
      iv. 4: [Q3 to max).
   b. Education as described below
      i. 0 if education level is: High School (HS) or less education (education <= 12 years),
      ii. 1 if education level is: University and more education (education > 12 years).
   c. "global_bl" global cognition at baseline
      i. 1: [min to Q1),
      ii. 2: [Q1 to median),
      iii. 3: [median to Q3),
      iv. 4: [Q3 to max).

(9) Is there an association between global cognition **at last visit (global_lv** categories) and education categories?

(10) Is there an association between global cognition **at baseline visit (global_bl** categories) and education categories?

(11) What do the result from part 3 & 4 tell you about the association between cognition and education?