

1. Problem 8.4 (a – f ) (p.335)

- It is up to you whether to use the original variable ( $X$ ) or centered variable  $x = X - \bar{X}$ .
- If you use the original variable, you can omit part f.
- If you use the centered variable, be sure to clearly state how the centered variable is created.

2. Problem 8.25 (p.339)

- In part b. Consider the following 2 cases separately.
  - (1) Evaluate if the quadratic term can be dropped when the interaction terms are in the model. Note that when the quadratic term is dropped, the interaction term(s) built on the quadratic term should also be dropped. Hence, there will only be 1 interaction term left in the model.
  - (2) Evaluate if the interaction terms and quadratic term can be dropped at the same time.
- In addition, answer the following question.
  - c. Why would we wish to include number of cases ( $X_1$ ) in the regression when our interest is in estimating the effects of holiday on labor hours?

3. Projects 8.39 (p.341)

- In part b, you can change the reference (baseline) level of the dummy variables to simplify the computation.

----- This is the end of HW 6. -----