MS Module 17: Regression analysis confidence intervals and hypothesis testing – homework assignment

(The attached PDF file has better formatting.)

Homework assignment:

Solve either *one* of the following end of chapter problems, showing all work. The numerical answers are in the appendix to the textbook; for the homework assignment, show how the answer is derived.

! Problem 31 (a) and (b) on page 638 (1st ed) / page 651 (2nd ed) / page 735 (3rd ed).
    " The problem gives β_1 and σ. Show how to derive S_{xx} and the standard deviation of the estimate of β_1
    " This problem gives the *x*-values; you don't need the corresponding y-values, since you are given β_1 and σ.
! Problem 35 (a) and (b) on page 638 (1st ed) / page 652 (2nd ed) / page 736 (3rd ed).
    " Part (a): show how to derive an estimate of β_1 and its standard deviation.
    " Part (b): show how to derive the *p* value for the estimate of β_1 to test the null hypothesis H_0: $\beta_1 = 0$