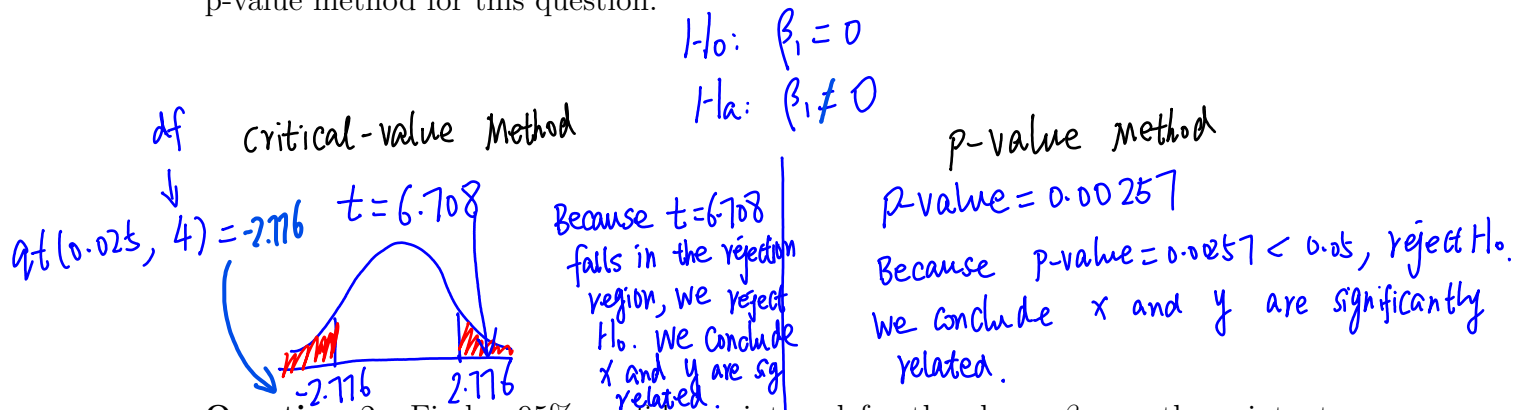**Please refer to the R output in Homework 0 (Page 102, Problem 3.6) and answer the following questions.**

You could also refer to the R output in the HW0 solution here:
Rstudio.cloud → R code shown in class → Files → Example Homework 0 Try R markdown.pdf

Question 1. Does the data provide sufficient evidence to indicate that x and y are significantly related? Use $\alpha = 0.05$. Please use **both** critical value method and p-value method for this question.

$H_0:\ \beta_1 = 0$

$H_a:\ \beta_1 \neq 0$

df

critical-value Method

$qt(0.025, 4) = -2.776$ $t = 6.708$

p-value Method

Because $t = 6.708$ falls in the rejection region, we reject H_0. We conclude x and y are sg related.

$-2.776 \qquad 2.776$

p-value $= 0.00257$

Because p-value $= 0.0257 < 0.05$, reject H_0. We conclude x and y are significantly related.

Question 2. Find a 95% confidence interval for the slope, β_1, on the printout. Interpret the result practically.

Confint (fit,   level = 0.95)

0.5023817 1.211904

We are 95% confident that when x increase 1 unit, the mean value of y will increase 0.5 to 1.21 units.

Instruction: Please complete the quick quiz on a piece of paper. Then take a picture and submit to Blackboard → Work Submission.