STAT 135 CONCEPTS OF STATISTICS
QUIZ 3, LAB 102

July 29, 2021

Instructions: *You have 35 minutes to complete the quiz and upload it on bCourses. This quiz is open book and you may use a calculator, but all work must be shown in order to receive full credit.*

Problem 1 (5 points total)**.** A scientist wants to know if education level and marital status are related for all people in some country. He collects data on a simple random sample of $n = 300$ people, part of which are shown below.

	Middle school or lower	High school	Bachelor's	Master's	PhD or higher
Never married	18	36	21	9	6
Married	12	36	45	36	21
Divorced	6	9	9	3	3
Widowed	3	9	9	6	3

Use this data to form a null and alternative hypothesis. Name the test to be carried out, perform the test, return a p-value, and make a conclusion about the relationship based on a 5% significance test. For full credit, **avoid using** `chisq.test()` **in** R.