STAT-319-Term 163-Sec.04
Quiz #1

Name: **ID**

Q1: (2+2+2=6-Points)

What is the error in each of the following statements?

a. The probability that a person will install 0, 1, 2, or 3 applications on a given day are 0.17, 0.15, 0.32, and 0.35 respectively.

b. The probability that it will rain tomorrow is 0.6 and the probability that it will not rain tomorrow is 0.5.

c. The probability that an emergency room will receive 0, 1, 2, 3, 4 call in 30-minute period is 0.19, 0.14, -0.23, 0.47, and 0.43 respectively.

Q2: (2+2+3=7-Points)

Suppose that a student has a chance of 50% of getting a full mark in the first exam, while he has only 30% of getting a full mark in the second exam. Find the probability that he will get a full mark in both exams in the following cases:

a. Assuming that both exams are independent.

b. Assuming that the student can obtain a full mark in one exam only.

c. Assuming that if the student gets full mark in the first exam, then with probability 0.2, will obtain a full mark in the second exam.

Q3: (5+2=7-Points)

Of the drivers who stop at a certain gas station, 80% purchase either gasoline or oil. A total of 74% purchase gasoline, and 11% purchase oil.

a. What percentage of drivers purchases gasoline but not oil?

b. Are the two events purchasing gasoline and purchasing oil independent? Explain using probability as your justification.