King Fahd University of Petroleum & Minerals
Department of Mathematics & Statistics
STAT-319-Term153
Quiz #1

Name: ID: Serial:

Q1: what is the error in each of the following statements?

a. The probability that a computer sales person will sell 0, 1, 2, or 3 computers on a given week are 0.18, 0.15, 0.29, and 0.39 respectively.

b. The probability that you will come to the class on time tomorrow is 0.4 and the probability that you will not come to the class on time tomorrow is 0.5.

c. The probability that a driver will make 0, 1, 2, 3, 4 car accidents in a year are 0.21, 0.15, 0.43, - 0.25, 0.46 respectively.

Q2: Suppose that 5% of the time item A is available in a store while the item B is available 7% of the time. Find the probability that both items A and B are available.

a. Assuming that availability of the item A has nothing to do with that of item B.

b. Assuming that A and B are never available together.

c. Assuming that if the item A available, then with probability 0.2, the item B will be available.

Q3: 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. What is the probability that a driver will purchase oil given that he purchased gasoline?

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