STAT211   Quiz 4   Wednesday November 14, 2012

Name: ————————————————   ID #: ————————————

1. A survey carried out for a supermarket classified customers according to whether their
    visits to the store are frequent or infrequent and whether they often, sometimes or never
    purchase the supermarket brand. Results of the survey are given in the following table.

Frequency of visit	Purchase of Supermarket Brand		
	Often	Sometimes	Never
Frequent	0.12	0.48	0.19
Infrequent	0.07	0.06	0.08

    a) What is the probability that a customer frequently visit the store?

    b) What is the probability that a customer never buys supermarket brand?

    c) What is the probability that a customer either frequently visits the store or never buys
        supermarket brand?

    d) What is the probability that a customer both is a frequent shopper and often purchases
        supermarket brand?

    e) What is the probability that a customer who never buys supermarket brand visits the
        store frequently?

    f) Are the events "Never buys supermarket brand" and "Visits the store frequently"
        independent? Justify your answer.

2. A stock market analyst examined the prospects of the shares of a large number of corporations. When the performance of these stocks was investigated one year later, it turned out that 30% performed much better than the market average, 20% much worse, and the remaining 50% about the same as the average. 40% of the stocks that turned out to do much better than the market were rated "good buys" by the analyst, as were 20% of those that did about as well as the market and 10% of those that did much worse. What is the probability that a stock rated a "good buy" by the analyst performed much better than the average?