Math 131 (Term 133) – Quiz 6

Student Name_____ **Student ID:** _____

Exercise 1

A travel agency has a computerized telephone that randomly selects telephone numbers for advertising suborbital space trips. The telephone automatically dials the selected number and plays a prerecorded message to the recipient of the call. Experience has shown that 20% of those called show interest and contact the agency. However, of these, only 14% actually agree to purchase a trip.

(a) Use a tree diagram to find the probability that a person called will contact the agency and purchase a trip.

(b) If 10,000 people are called, how many can be expected to contact the agency and purchase a trip.

Exercise 2

Events E and F satisfy the following conditions: P(E / F) = 0.4, P(E $\cap$ F) = 0.3, P(F / E) = 0.5. Determine whether E and F are independent or dependent.