Math 131 (Term 143) – Quiz 5

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 80% of those called show interest and contact the agency. However, of these, only 20% actually agree to purchase a trip.

(a) Use a tree diagram to find the probability that a person called will <u>contact</u> the agency and <u>does not purchase</u> a trip.

(b) If 10,000 people are called, how many can be expected to <u>contact</u> the agency and <u>does not purchase</u> 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.