

September, 2

Math 333-005, Fall 2005

Name: _____

Quiz 1

Student ID: _____

Must show all work for full credit!

I pledge I have not violated the NJIT Honor Code _____

A family consisting of four persons-A, B, C and D belonging to a medical clinic that always has a doctor at each of stations 1, 2, and 3. During a certain week, each member of the family visits the clinic once and is assigned at random to a station. The experiment consists of recording the station number for each member. One outcome is (1,2,1,3) for A to station 1, B to station 2, C to station 1 and D to station 3.

(a) What is the event that all members go to different stations?
(3 pts)

There are four persons and only three stations so there are no such outcomes.
Answer is \emptyset the empty set.

(b) List all the outcomes in the event that no one goes to station 1.
(4 pts)

- A B C D
- 2 2 2 2
 - 2 2 2 3
 - 2 2 3 2
 - 2 2 3 3
 - 2 3 2 2
 - 2 3 2 3
 - 2 3 3 2
 - 2 3 3 3
 - 3 2 2 2
 - 3 2 2 3
 - 3 2 3 2
 - 3 2 3 3
 - 3 3 2 2
 - 3 3 2 3
 - 3 3 3 2
 - 3 3 3 3

(c) List all the outcomes in the event that they all go to the same station.
(3 pts) 1111, 2222, 3333, for ABCD, respectively.