King Fahd Univ. of Petroleum and Minerals
Faculty of Sciences
Department of Mathematics and Statistics

QUIZ No. 4
(MATH. 131-122 Section 3)

Name:
ID:

Prob. 1
For a family of at least 2 children, let E and F be the events
E={at most one boy}
F={at least one child of each gender}
Assume that a child of either gender is equally likely and that, for example, having a girl first and a boy decond is just as likely as having a boy first and a girl second,. Determine whther E and F are independent in each of the following situations
(a) The family has exactly 2 children.
(b) The family has exactly 3 children.

Prob. 2
If a fair coin is tossed 3 times in succession, find each of the following
(a) The probability of getting exactly 2 tails given that the second toss is a tail.
(b) The probability of getting exactly 2 tails given that the second toss is a head.