ELENCO esercizi supportati da (R): da pagina 82 in avanti.
"Ross ved' su'are libri di testo su Moodle

23. Of three cards, one is painted red on both sides; one is painted black on both sides; and one is painted red on one side and black on the other. A card is randomly chosen and placed on a table. If the side facing up is red, what is the probability that the other side is also red?   RISULTATO: $2/3$

24. A couple has 2 children. What is the probability that both are girls if the eldest is a girl?   RISULTATO: $1/2$

Skippato x assenza sol.

30. Two balls, each equally likely to be colored either red or blue, are put in an urn. At each stage one of the balls is randomly chosen, its color is noted, and it is then returned to the urn. If the first two balls chosen are colored red, what is the probability that

(a) both balls in the urn are colored red;   c) Indipendenti?

(b) the next ball chosen will be red?

RISULTATO: VEDI SOLUZIONE PUBBLICATA

29. You ask your neighbor to water a sickly plant while you are on vacation. Without water it will die with probability .8; with water it will die with probability .15. You are 90 percent certain that your neighbor will remember to water the plant.

(a) What is the probability that the plant will be alive when you return?

(b) If it is dead, what is the probability your neighbor forgot to water it?

RISULTATO: $16/43$

Fatto ma non bene

27. There are two local factories that produce microwaves. Each microwave produced at factory A is defective with probability .05, whereas each one produced at factory B is defective with probability .01. Suppose you purchase two microwaves that were produced at the same factory, which is equally likely to have been either factory A or factory B. If the first microwave that you check is defective, what is the conditional probability that the other one is also defective?

RISULTATO: $13/300$

rifotto come a scuola da solo non bene

39. Five independent flips of a fair coin are made. Find the probability that

(a) the first three flips are the same;

(b) either the first three flips are the same, or the last three flips are the same;

(c) there are at least two heads among the first three flips, and at least two tails among the last three flips. RISULTATO: a) 1/4 b) 7/16 c) 6/32

35. Suppose that an insurance company classifies people into one of three classes — good risks, average risks, and bad risks. Their records indicate that the probabilities that good, average, and bad risk persons will be involved in an accident over a 1-year span are, respectively, .05, .15, and .30. If 20 percent of the population are "good risks," 50 percent are "average risks," and 30 percent are "bad risks," what proportion of people have accidents in a fixed year? If policy holder A had no accidents in 1987, what is the probability that he or she is a good (average) risk? 2 RISULTATO: 190/825

36. A pair of fair dice is rolled. Let E denote the event that the sum of the dice is equal to 7.

(a) Show that E is independent of the event that the first die lands on 4.

(b) Show that E is independent of the event that the second die lands on 3.

48. Two percent of woman of age 45 who participate in routine screening have breast cancer. Ninety percent of those with breast cancer have positive mammographies. Ten percent of the women who do not have breast cancer will also have positive mammographies. Given a woman has a positive mammography, what is the probability she has breast cancer? RISULTATO: 18/116

50. There is a 60 percent chance that the event A will occur. If A does not occur, there is a 10 percent chance that B will occur. What is the probability that at least one of the events A or B occur? RISULTATO: 0.64

33. Each of 2 cabinets identical in appearance has 2 drawers. Cabinet A contains a silver coin in each drawer, and cabinet B contains a silver coin in one of its drawers and a gold coin in the other. A cabinet is randomly selected, one of its drawers is opened, and a silver coin is found. What is the probability that there is a silver coin in the other drawer? RISULTATO: 2/3