

Exercise #4

*** In a study of violent victimization of women and men, Porcerilli et al. (A-2) collected information from 679 women and 345 men aged 18 to 64 years at several family practice centers in the metropolitan Detroit area. Patients filled out a health history questionnaire that included a question about victimization. The following table shows the sample subjects categories are defined as no victimization, partner victimization (and not by others), victimization by person other than partners (family member, friends or strangers) and those who reported multiple victimization

	No Victimization	Partners	Non-partners	Multiple partners	Total
Women	611	34	16	18	679
Men	308	10	17	10	345
Total	919	44	33	28	1024

Suppose we pick a subject at random from this group. Find

1. The probability that this subject will be a woman is

2. The probability that the subject will be a woman and have experienced partner abuse is

3. Suppose we picked a man at random knowing that he is a man , then the probability that he experienced abuse from non- partner.....

4. The probability that is a man or someone who experienced abuse from partner.....

5. The relation between being a man and being a woman is
 - a. Disjoint
 - b. exhaustive and disjoint
 - c. independent
 - d. exhaustive

****Fernando et al. (A-s) studied drug-sharing among injection drug users u=in South Bronx in New York City. Drug user in New York City use the term "split a bag" or "get down a bag" to refer the practice of dividing a bag of heroin or other injectable substances. A common practice includes splitting drugs after they are dissolved in a common cooker, a procedure with considerable HIV risk. Although this practice is common, little is known about the prevalence of such practice, the researchers asked injection drug user in four neighborhoods in the South Bronx if they ever "got down on" drug in bags or shots. The results classified by gender and splitting practice are given below:

Gender	Split Drugs	Never Split Drugs	Total
Male	349	324	673
Female	220	128	348
Total	569	452	1021

If a person picked at random. Find the probability that

1. He is never split drugs and is female.....
2. She he admits to splitting drug, given that she is female
3. He is not a man is
4. $(\text{Male}^c \cap \text{Split Drugs}) =$
5. $P(\text{Males} \cup \text{Split Drugs}) =$
6. $P(\text{Male} \mid \text{Split Drugs}) =$
7. $P(\text{Male}) =$
8. The relation between being a man and Never split drug is
 - a. Disjoint b. exhaustive c. independent d. exhaustive

**** suppose that dental clinic has 12 nurses classified as follows

The experiments is to randomly choose one of these nurses. Consider the following events:

C= the chosen nurse has children.

N= the chosen nurse works night shift.

Nurse	1	2	3	4	5	6	7	8	9	10	11	12
Has Children	Yes	No	No	No	No	Yes	No	No	Yes	No	No	No
Works at night	No	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes

If we pick a nurse at random ,then

- 1- The probabilities that the chosen nurse has children is
- 2- The probabilities that the chosen nurse works night shift is.....
- 3- The probabilities that the chosen nurse has children and works night shifts
- 4- The probabilities that the chosen nurse has children and doesn't work night shifts
- 5- Are having children and work at night disjoint?
- 6- Are having children and work at night exhaustive?
- 7- Are having children and work at night independent?

H.W

****Laveist and Nuru-Jeter (A-4) conducted a study determined if doctor-patient race concordance was associated with greater with care. Toward that end, they collected a national sample of African-American, Caucasian, Hispanic and Asian-American respondents. The following table classifies the race of the subject as well as the race of their physician:

		Patient's Race				
Physician Race		Caucasian	African American	Hispanic	Asian-American	Total
	White	779	436	406	475	1796
	African American	14	162	15	5	196
	Hispanic	19	17	128	2	166
	Asian-American Islander	68	75	71	203	417
	Other	30	55	56	4	145
	Total	910	745	676	389	2720

If we a randomly selected subject, then

1. The probability that a randomly selected subject will have an Asian/Pacific-Islander physicians.....
2. The probability that an African-America subject will have an African-American Physician is.....
3. The probability that a randomly selected subject will have as Asian-American and have an Asian/Pacific-Islander Physician.....
4. The probability that a subject chosen at random will be Hispanic or have a Hispanic Physician.....
5. The relation between Physician Race is Hispanic and Patient's Race is African American is
a.Disjoint b. exhaustive c. independent d.exhaustive
