

Name
Date

MAT 330-Introduction to Statistics
Assignment #5

1. Use the following table to answer questions (a)-(e):

The following table gives the two-way classification of 500 students based on sex and whether or not they suffer from math anxiety.

Sex	Suffer From Math Anxiety	
	Yes	No
Male	167	73
Female	168	92

- (a) If you randomly select one student from these 500 students, the probability that this selected student is a female is: (round your answer to three decimal places, so 0.0857 would be 0.086)
- (b) If you randomly select one student from these 500 students, the probability that this selected student suffers from math anxiety is: (round your answer to three decimal places, so 0.0857 would be 0.086)
- (c) If you randomly select one student from these 500 students, the probability that this selected student suffers from math anxiety, given that he is a male is: (round your answer to three decimal places, so 0.0857 would be 0.086)
- (d) If you randomly select one student from these 500 students, the probability that this selected student is a female, given that she does not suffer from math anxiety is: (round your answer to three decimal places, so 0.0857 would be 0.086)

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(e) Which of the following pairs of events are mutually exclusive? (Note: Make only one choice from the following options)

- | | |
|--------------------|-----------------|
| 1) Female and male | 4) Male and no |
| 2) Female and no | 5) Male and yes |
| 3) Female and yes | 6) No and yes |

2. The athletic department of a school has 12 full-time coaches, and 4 of them are female. The director selects two coaches at random from this group. The probability (to three decimal places) that neither of them is a female is:

3. The probability that an adult possesses a credit card is 0.71. A researcher selects two adults at random. The probability (rounded to three decimal places) that the first adult possesses a credit card and the second adult does not possess a credit card is:

4. The probability that a student at a university is a male is 0.52, that a student is a business major is 0.17, and that a student is a male and a business major is 0.08. The probability that a randomly selected student from this university is a male or a business major is: