Name: _____ Date: _____ Per: _____ Algebra 2

0.6 Conditional Probability Partner Practice

1. The table below shows the number of students who are varsity and junior varsity athletes. Rewrite each statement using the notation for probability or using words. Then, find each probability.

Class	Varsity (V)	Junior Varsity (JV)	
Freshman (F)	7	269	
Sophomore (S)	22	262	
Junior (J)	36	276	
Senior (SR)	51	257	

a) Find the probability that a student is a varsity athlete.	b) Find the probability that a student is a varsity athlete, given they are a senior.
c) What percent of students are seniors; given they are a varsity athlete?	d) Find P(F) Explain what this means in words.
e) Find P(F | JV). Explain what this means in words.	f) Find the probability that a student is a junior varsity athlete given that they are a freshman.
g) What percent of students are junior varsity athletes?	h) Find P(J).

2. A committee consists of four women and three men. The committee will randomly select two people to attend a conference in Hawaii. Find the probability that both are women.

3. Suppose a jar contains 8 red marbles and 4 white marbles. We draw two marbles, one at a time. Find each probability.
   a) Two red marbles are drawn, without replacement

   b) Two red marbles are drawn, with replacement

   c) The second marble drawn is red, given the first marble drawn is white and is not replaced

4. At Churchill, 14% of all 9th graders take Algebra 2 and 11% of all 9th graders take Algebra 2 and are in Mrs. DiNuzzo's class. What is the probability that a randomly selected 9th grader is in Mrs. DiNuzzo's class, given the student takes Algebra 2?

5. The data from a survey of 50 students is shown in the table below. The students were asked whether or not they were taking a foreign language and whether or not the played a sport. Rewrite each statement using the notation for probability. Then, find each value.

Group	Play a Sport (S)	Do Not Play a Sport (NS)	Totals
(L) Take a Foreign Language	14		37
(NL) Do Not Take a Foreign Language	10		
Totals		26	

a) Find the percent of students who played a sport given they did not take a language.

b) Find the probability that a student played a sport given they took a language.

c) Find the probability that a student does not play a sport or take a foreign language.

6. The table shows how students in Mr. Diaz's class fared on their first driving test. Some took a class to prepare, while other's did not. Find each probability.
    a) Paige passed, given that she took the class

    b) Madison failed, given that she did not take the class

    c) Jamal did not take the class, given that he passed

Status	Class	No Class
passed	64	48
failed	18	32

7. There are 8 action, 3 comedy and 5 drama DVDs on a shelf. Suppose three DVDs are selcted at random from the shelf. Find each probability.
    a) P(3 action), with replacement

    b) P(2 action, then comedy), without replacement

8. You draw a card from a standard deck of cards and show it to a friend. The friend tells you that the card is red. What is the probability that you correctly guess that the card is the ace of diamonds?