Name _____ Date _____
Mr. Schlansky Algebra II

Creating/Using Two Way Frequency Tables

1. In a class of 30 students, there are 16 girls and there are 12 honors students. If there are 10 honor students that are girls, create a two way frequency table to represent this situation.

What is the probability that a student is not an honors student given that they are a girl?

2. There are a total of 160 doctors in a city. There are 75 female doctors and 25 pediatricians. There are 20 female pediatricians.

Construct a two-way frequency table for this situation.

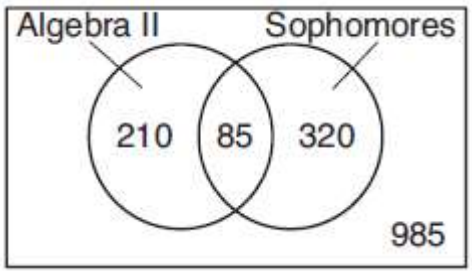
What is the probability that a doctor is a female given that they are a pediatrician?

What is the probability that a doctor is a pediatrician given that they are female?

3. The guidance department has reported that of the senior class, 2.3% are members of key club, *K*, 8.6% are enrolled in AP Physics, *P*, and 1.9% are in both. Determine the probability of *P* given *K*, to the *nearest tenth of a percent*. The principal would like a basic interpretation of these results. Write a statement relating your calculated probabilities to student enrollment in the given situation.

4. A study was designed to test the effectiveness of a new drug. Half of the volunteers received the drug. The other half received a sugar pill. The probability of a volunteer receiving the drug and getting well was 40%. What is the probability of a volunteer getting well, given that the volunteer received the drug?

5. Data for the students enrolled in a local high school are shown in the Venn diagram below. Create a two way frequency table to represent this situation.
If a student from the high school is selected at random, what is the probability that the student is a sophomore given that the student is enrolled in Algebra II?



6. In a local high school, the probably that a student passes the Algebra II Regents is 82% and the probably that a student passes Chemistry Regents is 74%. If the probably that a student passes neither exam is 18%, find the probability that a student passes the Chemistry Regents only.

7. Out of 29 students in a Geometry class, 19 came to a 6-hour review class in June. 16 of the students who attended the review session passed the Regents. If 20 students passes the Regents, how much more likely was it that a student who took the review class passed the Regents than a student that did not take the review class. Round your answer to the nearest percent.

8. There are 84 athletes on a Track and Field team. 68 are sprinters and 14 are jumpers. If 10 athletes neither sprint nor jump, what is the probability that a sprinter is a jumper? Round your answer to the nearest tenth of a percent.