Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Analyzing Venn Diagrams HOMEWORK**

**If the Venn Diagram below shows the number of people in a fine arts club who are in band (B) and choir (C), make the following determinates:**

1. How many people are in the club?

**B**

**C**

**24**

**2**

**16**

**8**

1. Find P(B)
2. Find P(B and C)
3. Find P(B or C)
4. Find P(B)’

**A guidance counselor is planning schedules for 30 students. 16 want to take Spanish and 11 want to take Latin. 5 Say they want to take both. Display this information on the Venn Diagram below.**

**Spanish**

**Latin**

1. Find P(S and L)
2. Find P(L)
3. What is the probability that a student studies at least one subject? P(S or L)
4. What is the probability that a student studies exactly one subject?
5. What is the probability that a student studies neither subject? P(S or L)’
6. What is the probability that a student studied Spanish if it is known that the student studies Latin?

**Mr. Leary’s Class: Use the Venn Diagram showing the number of kids owning bicycles (A) and skateboards (B) to find the following probabilities.**

**Bicycle**

**Skateboard**

**Ryan**

**Sarah**

**Mariko**

**Nina**

**Dion**

**Joe**

**Mike**

**Linda**

**Rose**

**Brett**

**Juan**

**Tobi**

**Amy**

**Gabe**

**Abi**

1. Find P(A ∩ B) and describe what this probability represents?
2. Find P(A ∪ B) and describe what this probability represents?
3. Find P(A ∪ B)’ and describe what this probability represents?

**The Venn Diagram below shows the results of a survey done by a veterinarian about the types of pets owned by 26 clients. The survey was only related to dogs (D), cats (C), and fish (F).**

**D**

**C**

**7**

**F**

**4**

**5**

**0**

**1**

**3**

***k***

**5**

1. What is the value of *k*?
2. How did you determine the value?

**If a randomly selected member is asked their preference, what is the probability that the member has:**

1. Only dogs?
2. Dogs and cats?
3. None of these animals?
4. At least one of these pets?
5. All of the pets?
6. Fish and dogs, but not cats?
7. Fish or dogs?