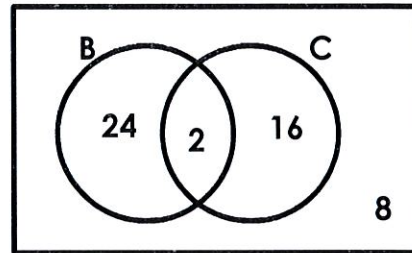


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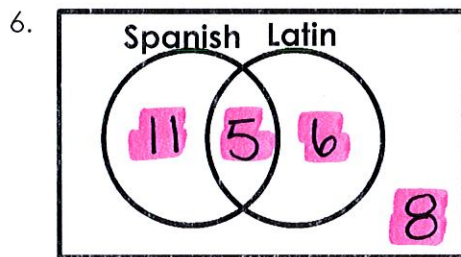
Using Venn Diagrams

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:

- 50 1. How many people are in the club?
- 13/25 2. Find $P(B)$ 26/50
- 1/25 3. Find $P(B \cap C)$ 2/50
- 21/25 4. Find $P(B \cup C)$ 42/50
- 12/25 5. Find $P(B)'$ 24/25

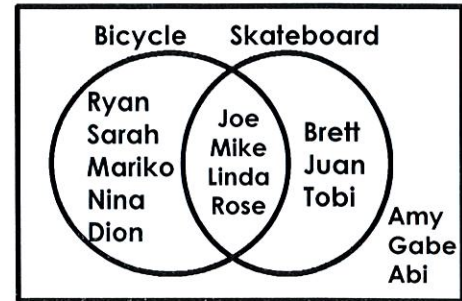


A guidance counselor is planning schedules for 30 students. 16 want to take Spanish and 11 want to take Latin. 5 Say they want to take both. Display this information on the Venn Diagram below.



- 1/6 7. Find $P(S \cap L)$ 5/30
- 11/30 8. Find $P(L)$
- 11/15 9. What is the probability that a student studies at least one subject? $P(S \cup L)$ 22/30
- 17/30 10. What is the probability that a student studies exactly one subject?
- 4/15 11. What is the probability that a student studies neither subject? $P(S \cup L)'$ 8/30
- 5/11 12. 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.



4/15 13. Find $P(A \cap B)$ and describe what this probability represents? probability of owning both things.

4/5 14. Find $P(A \cup B)$ and describe what this 12/15 probability represents? probability of owning at least one of the things.

1/5 15. Find $P(A \cup B)'$ and describe what this 3/15 probability represents? probability of owning neither thing.

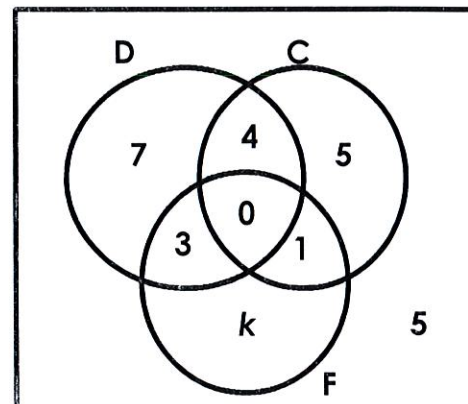
The Venn Diagram below shows the results of a survey done by a veterinarian about the types of pets owned by 26 clients. The survey was only related to dogs (D), cats (C), and fish (F).

1 16. What is the value of k ?

17. How did you determine the value?

$$26 = 7 + 4 + 5 + 3 + 1 + 5 + k$$

$$26 = 25 + k$$



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

7/26 18. Only dogs?

2/13 19. Dogs and cats? 4/26

5/26 20. None of these animals?

21/26 21. At least one of these pets?

0/26 22. All of the pets?

3/26 23. Fish and dogs, but not cats?

8/13 24. Fish or dogs? 16/26