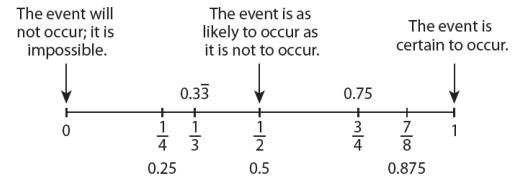


Name: _____ Date: _____

Vocabulary, Set Notation, & Venn Diagrams

Probability

- A number from 0 to 1
- As a percent from _____ to _____
- Indicates how likely an _____ will occur.



Experiment

- Any process or action that has observable results
- Example: _____

Outcomes

- _____
- Example: _____

Sample Space

- The set (or list) of _____
- Also known as the _____
- Example: _____

Event

- A subset of an _____
- An outcome or _____
- Example: _____

Set

- _____

Subset

- List or collection of _____ all contained within another set.
- Denoted by _____ if all the elements of A are also in B.

Empty Set

- A set that has _____
 - Also called a _____
 - Denoted by _____
-

Union

- Denoted by _____
 - To unite
 - Everything in _____ sets
-

Intersection

- Denoted by _____
 - Only what the sets _____ in common.
-

Complement

- Denoted two different ways: _____ or _____
 - Everything _____ of this set
-

Hector has entered the following names in the contact list of his new cellphone. Alicia, Brisa, Steve, Don, and Ellis. Two sets are determined. Set B: Names that begin with a vowel and Set E: Names that end with a vowel.

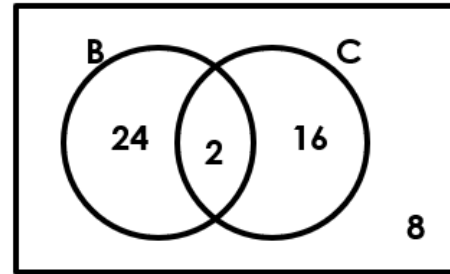
1. List the outcomes of B.
 2. List the outcomes of E.
 3. List the outcomes of $B \cap E$.
 4. Draw a venn diagram to represent this.
 5. List the outcomes of $B \cup E$.
 6. List the outcomes of B' .
 7. List the outcomes of $(B \cup E)'$.
-

Name: _____ Date: _____

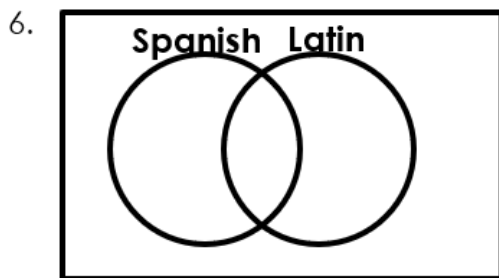
Using Venn Diagrams

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:

- _____ 1. How many people are in the club?
- _____ 2. Find $P(B)$
- _____ 3. Find $P(B \cap C)$
- _____ 4. Find $P(B \cup C)$
- _____ 5. 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.



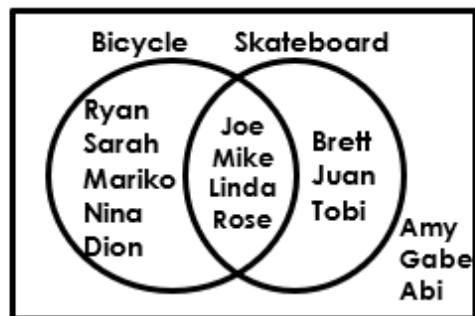
- _____ 7. Find $P(S \cap L)$
- _____ 8. Find $P(L)$
- _____ 9. What is the probability that a student studies at least one subject? $P(S \cup L)$
- _____ 10. What is the probability that a student studies exactly one subject?
- _____ 11. What is the probability that a student studies neither subject? $P(S \cup L)'$
- _____ 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.

_____ 13. Find $P(A \cap B)$ and describe what this probability represents?

_____ 14. Find $P(A \cup B)$ and describe what this probability represents?

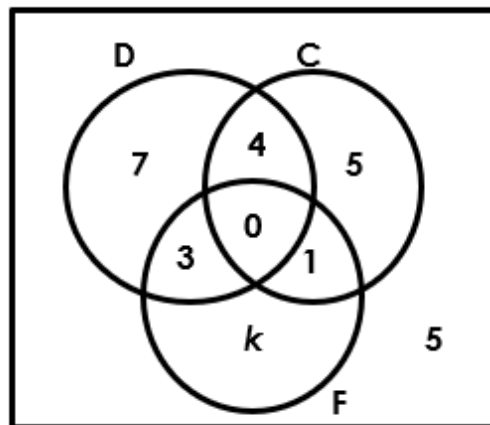
_____ 15. Find $P(A \cup B)'$ and describe what this probability represents?



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).

_____ 16. What is the value of k ?

17. How did you determine the value?



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

_____ 18. Only dogs?

_____ 19. Dogs and cats?

_____ 20. None of these animals?

_____ 21. At least one of these pets?

_____ 22. All of the pets?

_____ 23. Fish and dogs, but not cats?

_____ 24. Fish or dogs?