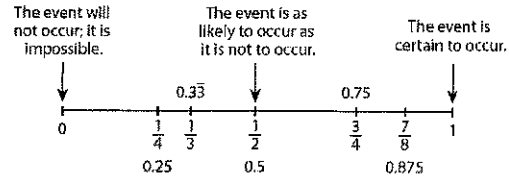
Name: _____ Date: _____

Vocabulary, Set Notation, & Venn Diagrams

Probability

- A number from 0 to 1
- As a percent from 0 to 100
- Indicates how likely an event will occur.



Experiment

- Any process or action that has observable results
- Example: $P(A) = \frac{\text{\# occured}}{\text{total trials}}$

Outcomes

- A possible Result of a probability experiment
- Example: Roll a Dice – 1, 2, 3, 4, 5, 6

Sample Space

- The set (or list) of all possible outcomes of a prob. experi.
- Also known as the Universal set
- Example: Roll Dice {1, 2, 3, 4, 5, 6}

Event

- A subset of a sample space
- An outcome or set of outcomes
- Example: Roll a Die – {5, 6} roll could be 5 or 6

Set

- A collection of things

Subset

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

Empty Set

- A set that has no items
- Also called a null set
- Denoted by { ∅ }

Union

- Denoted by ∪
- To unite
- Everything in both sets

Intersection

- Denoted by ∩
- Only what the sets HAVE in common.

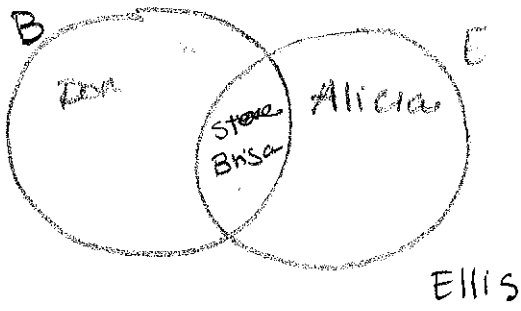
Complement

- Denoted two different ways: A' or $\overline{A}$
- Everything outside of this set

Hector has entered the following names in the contact list of his new cellphone: Alicia, Brisa, Steve, Don, and Ellis. B - begins w/ consonant

E - ends in vowel

1. Draw a venn diagram to represent this.



2. List the outcomes of B.
Don, Steve, Brisa
3. List the outcomes of E.
Alicia, Steve, Brisa
4. List the outcomes of B∩E.
Steve, Brisa
5. List the outcomes of B∪E.
Don, Steve, Brisa, Alicia
6. List the outcomes of B'.
Alicia, Ellis
7. List the outcomes of (B∪E)'.
Ellis