

Math 128
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Chapter 7 Vocabulary

Experiments: activity, game
Ex: rolling a die

A trial: is a piece (part) of the experiment.
Ex: each roll

Outcomes: things that potentially happen in the experiment/ a result that can happen in the experiment

Ex: rolling a die
First outcome = 1
Second outcome = 2
Third outcome = 3
Fourth outcome = 4
Fifth outcome = 5
Sixth outcome = 6

Sample Space: collection of all outcomes
Ex: rolling a die once
SS= {1, 2, 3, 4, 5, 6}

Event: Subset of the sample space

- Simple Event: exactly one outcome pertains to event
Ex: rolling a 3 ---- SS= {3}
- Compound Event: more than one outcome pertains to event
Ex: rolling less than a 3 ---- SS= {1, 2}

Equally Likely Events: for every outcome, chances are equal with all the other outcomes
Ex: rolling a die once

All the outcomes;

First outcome = 1 Probability for this outcome is $(1/6)$

Second outcome = 2 Probability for this outcome is $(1/6)$

Third outcome = 3 Probability for this outcome is $(1/6)$

Fourth outcome = 4 Probability for this outcome is $(1/6)$

Fifth outcome = 5 Probability for this outcome is $(1/6)$

Sixth outcome = 6 Probability for this outcome is $(1/6)$

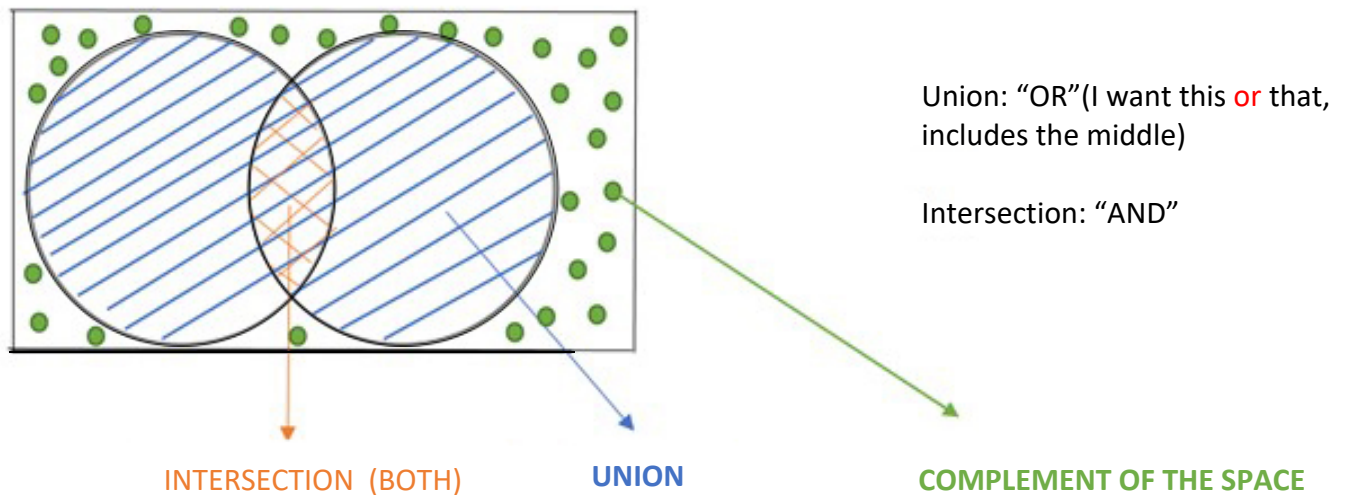
Exponential: (of an increase) becoming more and more rapid.

The Union of Two Events: is the set of outcomes that pertain to one of the events or both of the events. $(A \cup B)$

The Intersection of Two Events: is the set of all outcomes that pertain to both events in sample space. $(A \cap B)$

The Complement of an Event: is the set of all outcomes in the sample space that don't pertain to the event. (A')

Venn Diagram:



Mutually Exclusive: two events (A and B) are mutually exclusive, if they cannot happen at the same time.

Ex: the two possible outcomes of a coin flip are mutually exclusive; when you flip a coin, it cannot land both heads and tails simultaneously.

Independent: two events (A and B) are independent, if the probability of one has no effect on the probability of the other.

Ex: Landing on heads after tossing a coin AND rolling a 5 on a single 6-sided die.