10.1 Likelihoods:

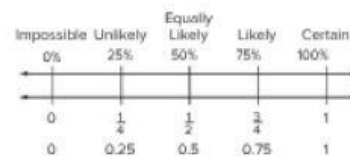|	Impossible	Unlikely	Equally Likely	Likely	Certain
Description	not possible	having a poor chance of success	same chance of happening as not happening	having a good chance of success	sure to happen

10.2 Relative frequency and Experimental   :

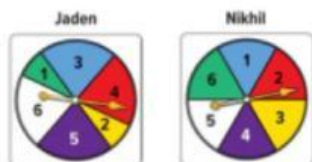| Words	Relative frequency is the ratio of the number of favorable outcomes to the total number of outcomes in an experiment.
Ratio	number of favorable outcomes / total number of outcomes

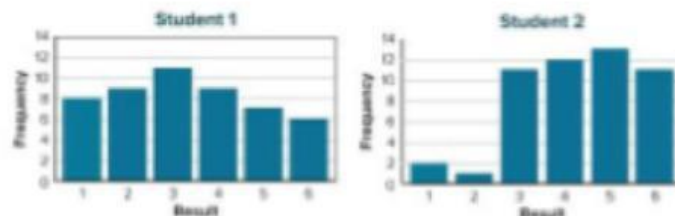| Words	Experimental probability is the ratio of the number of favorable outcomes to the total number of outcomes.
Ratio	$P(\text{event}) = \dfrac{\text{number of favorable outcomes}}{\text{total number of outcomes}}$

10.3 Theoretical probability

Words	Theoretical probability is the ratio of the number of favorable outcomes to the total number of outcomes.
Ratio	$P(\text{event}) = \dfrac{\text{number of favorable outcomes}}{\text{total number of outcomes}}$

	Impossible	Unlikely	Equally Likely	Likely	Certain
	0%	25%	50%	75%	100%
	0	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{3}{4}$	1
	0	0.25	0.5	0.75	1

10.4 Compare events: Decide which event is shown by which graph. Use the size of the spinner to decide.

Jaden   Nikhil

Student 1   Student 2

Jaden is Student 2, and Nikhil is Student 1.
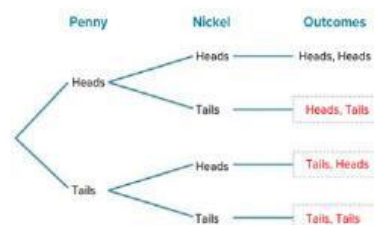
10.5 Probability of

Learn Sample Space for Compound Events

A **compound event** consists of two or more simple events.

As with simple events, the sample space for a compound event is the set of all possible outcomes.

Penny	Nickel	Outcomes
	Heads	Heads, Heads
Heads	Tails	Heads, Tails
Tails	Heads	Tails, Heads
	Tails	Tails, Tails

10.6 Simulations

Is an easier way to show an experiment that is complex (difficult).

Five different events are shown in the table. Choose the model that can be used to correctly simulate each event by placing an X in that column.

Event	Spinner with Four Equal-Size Sections	One Coin Toss
your favorite book out of four books being randomly assigned for a book report	x	
your favorite baseball team has $\frac{2}{4}$ probability of winning	x	
a $\frac{1}{2}$ chance a girls' soccer team wins its first game		x
forecast shows a 50% chance of rain		x
a marble is randomly chosen from a bag containing four different color marbles	x	