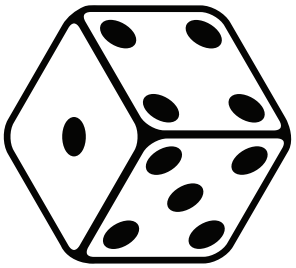
Chance Experiment

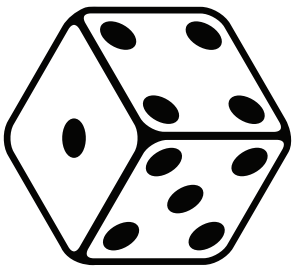
Roll a die (numbered from 1 to 6) 30 times and record the result of each roll in the table below.
Before you start, guess how many of each number you think will appear.

	GUESS	TALLY	TOTAL
⚀			
⚁			
⚂			
⚃			
⚄			
⚅			



Roll the die another 30 times and record the result of each roll in the table below.
Before you start, guess how many of each number you think will appear this time.

	GUESS	TALLY	TOTAL
⚀			
⚁			
⚂			
⚃			
⚄			
⚅			

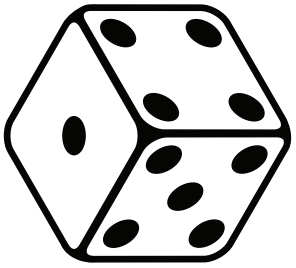


Why weren't the results the same in each experiment?

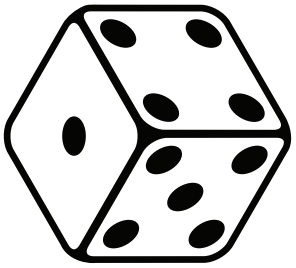
My Chance Experiment

These are my results!

	GUESS	TALLY	TOTAL
⚀	4	||||	4
⚅	6	||||||	7
⚃	8	|||||	6
⚄	5	||||\	5
⚂	5	|||	3
⚁	2	||||\	5



	GUESS	TALLY	TOTAL
⚀	2	|||||\	6
⚅	5	||||||	7
⚃	6	||	2
⚄	4	||||\	5
⚂	5	|||\	4
⚁	8	|||||	6



IN ALMOST EVERY EXPERIMENT THE RESULTS WILL BE DIFFERENT!

The chance of rolling a certain number is one out of six. So we would expect each number to appear 5 times out of 30.

But, that is not how chance works. There is an equal chance of any number appearing on each roll. So, this makes it impossible to guess with accuracy what each roll will be and to guess how many of each number will appear.