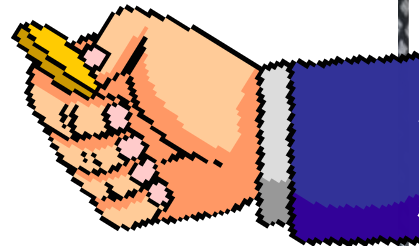


Do Now

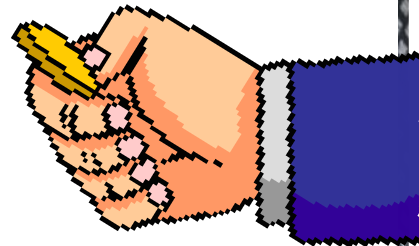
Please place your homework in front of you and work quietly on this Do-Now.
Thank you!

What is the probability of flipping a coin twice and having it land on heads both times?



Do Now

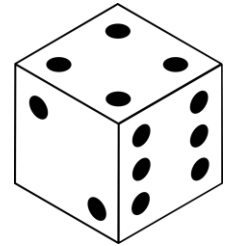
What is the probability of flipping a coin twice and having it land on heads both times?



Independent Events: Independent events are events where the outcome of one event does not affect the outcome of the other events.

The probability of independent events is equivalent to the _____ of the probability of each individual event.

Example: What is the probability of rolling a standard die
And having it land on 6 twice in a row?



$P(6, 6)$

Sample space:

Marble run demo

Most likely sum?

What is the most likely sum when rolling two dice?



Most likely sum?

One way to find out is by performing an experiment.

Take turns rolling dice with a partner.

One person rolls the dice while the other person tallies each sum on the table below.

You will switch roles when Mr. Colby says “switch”.



2	3	4	5	6	7	8	9	10	11	12

P(2) P(3) P(4) P(5) P(6) P(7) P(8) P(9) P(10) P(11) P(12)

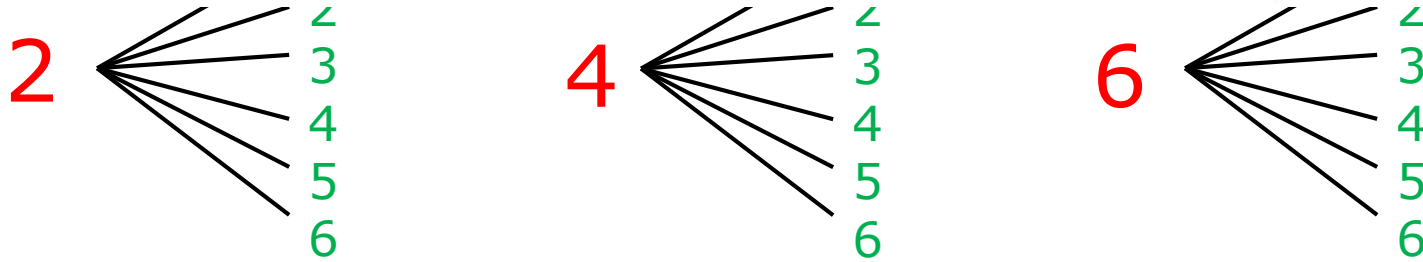
These are “experimental probabilities”

Experimental Probability: Probability based on experimental data or observations.

Most likely sum?



~~_____~~ has won more than
prize drawings... the rest of
US have hardly even won five...
just is a
little unfeair



P(2) P(3) P(4) P(5) P(6) P(7) P(8) P(9) P(10) P(11) P(12)

These are “theoretical probabilities”

Theoretical Probability: Probability that is calculated as the ratio of the number of favorable outcomes to the number of possible outcomes.

Drawing cubes

In the bag there are 3 blue cubes, 2 green cubes, and 1 yellow cube.

What is the probability of drawing a green cube, placing it back in the bag, and then drawing a yellow cube?

$P(\text{green, yellow})$

$P(\text{green, yellow})$

Are these events independent?



Drawing cubes

What is the probability of drawing a green cube, not replacing it back in the bag, and then drawing a yellow cube?

$P(\text{green, yellow})$

$P(\text{green, yellow after green})$

Are these events independent?

