



Intro to Probability

* Probability: The likelihood that an event will occur.

* Usually written as a fraction but can also be written as a percent or decimal.

* Sample space: A list of all possible outcomes.

* Favorable Outcome: The outcome that you want to happen.

* Trial: Another name for performing an experiment.

of favorable outcomes → what you want to happen
Total possible outcomes

Probability of flipping heads: $\frac{1}{2}$ Probability of picking hearts: $\frac{1}{4}$

Probability of rolling a 4: $\frac{1}{6}$ Probability of rolling a 7: $\frac{0}{6} = 0$

Probability of selecting a red tile from a bag with 1 green tile, 2 red tiles, 3 yellow tiles, and 6 blue tiles: $\frac{3}{12} = \frac{1}{4}$

of times the event actually occurs
Total # of trials

A coin is flipped 20 times and lands on heads 12: $\frac{12}{20} = \frac{3}{5}$

A card is selected from a standard deck 16 times and replaced each time. Hearts are selected 3 times. $\frac{3}{16}$

A number cube is rolled 48 times and lands on 4 10 times: $\frac{10}{48} = \frac{5}{24}$

A number cube is rolled 60 times and lands on an even number 40 times: $\frac{40}{60} = \frac{2}{3}$

A green tile is drawn out of the bag above 8 times out of 24: $\frac{8}{24} = \frac{1}{3}$

0% Rolling a number cube: Roll a 10
Picking a tile out of the bag: White

25% Real Life: Earthquake
Rolling a number cube: Roll 1
Picking a tile out of the bag: Yellow

50% Real Life: Answer a T/F question correctly
Rolling a number cube: Roll even number
Picking a tile out of the bag: Purple

75% Real Life: Arrive on time
Rolling a number cube: Roll 6
Picking a tile out of the bag: Purple

Certain

100%

