Probability – The Basics

A **trial** is any procedure that can be infinitely repeated and has a well-defined set of possible outcomes.

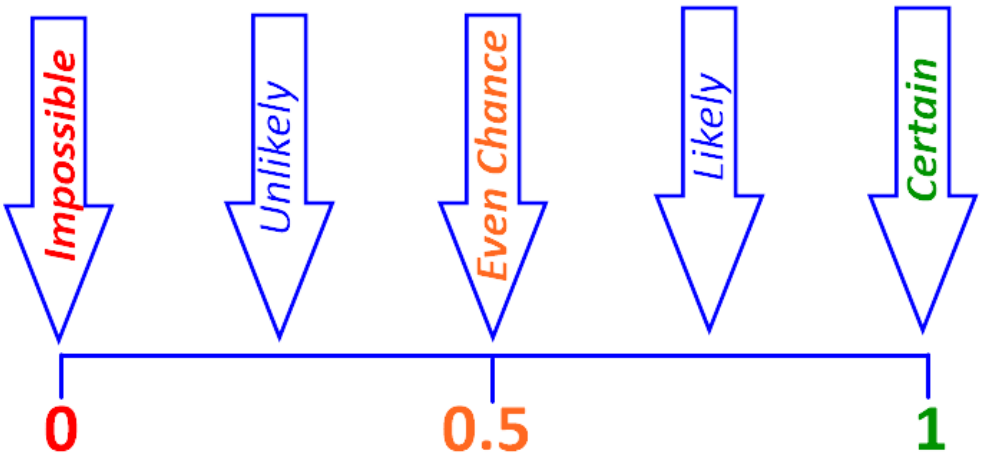
An **event** is a set of outcomes of an experiment to which a probability is assigned.

An **outcome** is a possible result of an experiment. Each possible outcome of a particular experiment is unique

The difference between your event and your outcome will depend on what your experiment is looking for

The Probability Scale

All probabilities must range from 0 to 1 where 0 is impossible and 1 is certain.



For each of the following information given below, decide if this is an example of a trial, event or outcome

1. Rolling a dice
   ☐ trial ☐ event ☐ outcome
2. P(A) and P(A')
   ☐ trial ☐ event ☐ outcome
3. Heads or tails
   ☐ trial ☐ event ☐ outcome
4. Flipping a coin
   ☐ trial ☐ event ☐ outcome
5. 1, 2, 3, 4, 5 and 6
   ☐ trial ☐ event ☐ outcome
6. red, yellow, blue and green
   ☐ trial ☐ event ☐ outcome
7. P(heads) or P(tails)
   ☐ trial ☐ event ☐ outcome
8. Spinning a spinner
   ☐ trial ☐ event ☐ outcome

For each of the following scenarios, choose the beast word from the probability scale to describe them

Impossible Unlikely Even Chance Likely Certain

a) It will be daylight at midnight in London tonight

_____

b) If I flip a coin it will land on heads

_____

c) Next week, Wednesday will be the day after Tuesday

_____

d) There will be 33 days in February 2021

_____

Solutions

1. Rolling a dice
   ☒ trial ☐ event ☐ outcome
2. P(A) and P(A')
   ☐ trial ☒ event ☐ outcome
3. Heads or tails
   ☐ trial ☐ event ☒ outcome
4. Flipping a coin
   ☒ trial ☐ event ☐ outcome
5. 1, 2, 3, 4, 5 and 6
   ☐ trial ☐ event ☒ outcome
6. red, yellow, blue and green
   ☐ trial ☐ event ☒ outcome
7. P(heads) or P(tails)
   ☐ trial ☒ event ☐ outcome
8. Spinning a spinner
   ☒ trial ☐ event ☐ outcome

For each of the following scenarios, choose the beast word from the probability scale to describe them

Impossible Unlikely Even Chance Likely Certain

a) It will be daylight at midnight in London tonight

certain

b) If I flip a coin it will land on heads

even chance

c) Next week, Wednesday will be the day after Tuesday

impossible

d) There will be 33 days in February 2021

impossible