

Probability

7th Grade

A number between 0 and 1 — and what it does and does not promise.

Probability is the number of favourable outcomes divided by the total number of equally likely outcomes.

$$P(\text{event}) = \text{favourable} \div \text{total}$$

Rolling a 4 on a die

1/6

One favourable out of six.

Rolling an even number

3/6 = 1/2

Three favourable outcomes.

P(not A)

1 – P(A)

Everything else adds to one.

Impossible / certain

0 / 1

Probability never goes outside this range.

THE COMMON MISTAKE

× I got three heads, so tails is due

✓ each flip is still 50/50

A coin has no memory. Past results do not change the next one.

Theoretical probability is what should happen. Experimental is what did. They converge over many trials.