

Probability

Probability measures how likely an event is to occur on a scale from zero (impossible) to one (certain). Most SAT probability questions come from a described scenario or a **two-way table** and ask for the chance of a single event, a combination of events, or a conditional outcome.

1

Key vocabulary and definitions

Outcome

A single possible result of an experiment or trial.

Sample space

The set of all possible outcomes

Complement

All outcomes not in the event.
 $P(\text{not } A) = 1 - P(A)$

Event

One outcome or a group of outcomes that satisfy a given condition.

Independent events

The outcome of one event does not affect the probability of the other.

Mutually exclusive

Two events that cannot both happen at the same time.



SAT tip

Probability is always a fraction, decimal, or percentage between 0 and 1, or (0% and 100%). If your answer falls outside that range, recheck your setup.

2

Basic probability

Every single event probability question reduces to a simple ratio.

Basic probability formula

$$P(\text{event}) = (\text{favorable outcomes}) / (\text{total possible outcomes}).$$