Gambling Probability Calculator

Calculate expected value and understand the mathematics of gambling

Basic Probability Calculator

Number of Favorable Outcomes

e.g., 1

Total Possible Outcomes

e.g., 6

Formula: Probability = Favorable Outcomes / Total Outcomes

Expected Value Calculator

Win Probability (%)

e.g., 47.4

Win Amount ($)

e.g., 10

Loss Probability (%)

e.g., 52.6

Loss Amount ($)

e.g., 10

Formula: EV = (Win Prob x Win Amount) - (Loss Prob x Loss Amount)

Long-Term Loss Calculator

Bet Amount ($)

e.g., 10

House Edge (%)

e.g., 5.26

Number of Bets

e.g., 100

Remember: The more you gamble, the closer your results will get to the expected loss due to the house edge.

Lottery Expected Value

Ticket Cost ($)

e.g., 2

Jackpot Amount ($)

e.g., 100000000

Odds of Winning (1 in X)

e.g., 300000000

Common Gambling Games - House Edge Reference

Game	House Edge	Expected Loss per $100 Wagered	Win Probability
Blackjack (basic strategy)	0.5%	$0.50	~49%
Craps (pass line)	1.4%	$1.40	~49%
Baccarat	1.06%	$1.06	~49%
European Roulette	2.7%	$2.70	~48.6%
American Roulette	5.26%	$5.26	~47.4%
Slot Machines	2-15%	$2-$15	Varies
Keno	25-30%	$25-$30	Very Low
Lottery	40-50%	$40-$50	Extremely Low

Key Insight: The lower the house edge, the better your odds. However, ALL gambling games favor the house in the long run.

Multiple Independent Events Calculator

Calculate the probability of winning multiple times in a row (e.g., coin flips, roulette spins).

Single Event Win Probability (%)

e.g., 50

Number of Consecutive Wins Needed

e.g., 5

Gambler's Fallacy Warning: Each independent event (like a coin flip) is NOT affected by previous results. If you've lost 10 times in a row, your next bet still has the same probability of winning.