POKALAB

Poker math cheat sheet

Pot odds · MDF · Bluffs · Fold equity · SPR · Geometric sizing

By bet size

s = the bet as a fraction of the pot before it

GROUP	BET (% POT)	FOLD AT MOST (ALPHA)	MDF: DEFEND AT LEAST	EQUITY TO CALL	BALANCED RIVER VALUE : BLUFF
Tiny	10%	9.1%	90.9%	8.3%	11 : 1
Small	25%	20.0%	80.0%	16.7%	5 : 1
	30%	23.1%	76.9%	18.7%	4.3 : 1
	33%	24.8%	75.2%	19.9%	4 : 1
Half	50%	33.3%	66.7%	25.0%	3 : 1
Large	66%	39.8%	60.2%	28.4%	2.5 : 1
	70%	41.2%	58.8%	29.2%	2.4 : 1
	75%	42.9%	57.1%	30.0%	2.3 : 1
Pot	100%	50.0%	50.0%	33.3%	2 : 1
Overbet	125%	55.6%	44.4%	35.7%	1.8 : 1
	137%	57.8%	42.2%	36.6%	1.7 : 1
	150%	60.0%	40.0%	37.5%	1.7 : 1
Overbet big	200%	66.7%	33.3%	40.0%	1.5 : 1
	250%	71.4%	28.6%	41.7%	1.4 : 1
	300%	75.0%	25.0%	42.9%	1.3 : 1

Geometric sizing

bet per street, % pot

SPR	OVER 2 STREETS	OVER 3 STREETS
1	37%	22%
2	62%	35%
3	82%	46%
4	100%	54%
6	130%	68%
8	156%	79%
10	179%	88%
13	210%	100%
18	254%	117%

MDF vs reality

how often they fold

RIVER BET	MDF MAX	SOLVER	NL50 REGS
30%	23.1%	28.7%	37.3%
50%	33.3%	38.6%	46.8%
70%	41.2%	45.2%	52.9%
100%	50.0%	53.8%	57.1%
137%	57.8%	61.5%	66.7%
200%	66.7%	73.0%	78.9%

Big blind vs button, single-raised pot: the big blind check-called the flop and the turn and faces a river bet. Regulars vs regulars, five rooms, 6-max, shortest stack at the table 80–120 bb, measured October 2026 on 364M real hands. Each size is a range (70% = bets of 57–79% of the pot).

Formulas

Fold at most — alpha

$bet \div (pot + bet) = s \div (1 + s)$

Fold more and any two cards can bet. Also the folds a pure bluff needs.

MDF — minimum defense frequency

$1 \div (1 + s)$

Always 1 − alpha.

Pot odds — equity needed to call

$call \div (pot + bet + call)$

Half pot: 5 to win 15 → 25%.

Balanced river bluffs (share of bets)

$s \div (1 + 2s)$

The same number as the caller's pot odds: then bluff-catchers break even.

Semi-bluff — fold equity needed

$-K \div (pot - K)$, $K = eq \times (pot + 2\,bet) - bet$

K = what the bet wins when called; 0 needed if K ≥ 0.

SPR and geometric sizing

$SPR = stack \div pot \cdot f = ((1 + 2\,SPR)^{1/n} - 1) \div 2$

f = the same fraction of the pot on each of n streets, all in on the last.

MDF is the theory: the most you can fold before any two cards bet profitably. The solver folds a few points more, even on the river; NL50 regulars fold more still. See how the population and the solver really play every spot, board and bet size — the NL50 GGPoker preview is free.

pokalab.com/tools/poker-math