



Outs to equity

OUTS	TYPICAL DRAW	TURN CARD	RIVER CARD	RULE OF 2	FLOP TO RIVER	RULE OF 4
1		2.1%	2.2%	2%	4.3%	4%
2	Pocket pair to a set	4.3%	4.3%	4%	8.4%	8%
3		6.4%	6.5%	6%	12.5%	12%
4	Gutshot straight draw	8.5%	8.7%	8%	16.5%	16%
5	One pair to two pair or trips	10.6%	10.9%	10%	20.4%	20%
6	Two overcards	12.8%	13.0%	12%	24.1%	24%
7		14.9%	15.2%	14%	27.8%	28%
8	Open-ended straight draw	17.0%	17.4%	16%	31.5%	32%
9	Flush draw	19.1%	19.6%	18%	35.0%	35%
10		21.3%	21.7%	20%	38.4%	38%
11		23.4%	23.9%	22%	41.7%	41%
12	Flush draw + gutshot	25.5%	26.1%	24%	45.0%	44%
13		27.7%	28.3%	26%	48.1%	47%
14		29.8%	30.4%	28%	51.2%	50%
15	Flush draw + open-ender	31.9%	32.6%	30%	54.1%	53%

Turn card: one card with 47 unseen. River card: one card with 46 unseen. Flop to river: both cards, all in on the flop. Rule of 2: outs x 2 for one card. Rule of 4: outs x 4 for two cards; above 8 outs subtract the outs over 8 (15 outs: $60 - 7 = 53\%$) to stay close to the exact figure.

Pot odds

BET YOU FACE	POT ODDS	EQUITY NEEDED
Quarter pot	5:1	16.7%
One-third pot	4:1	20.0%
Half pot	3:1	25.0%
Two-thirds pot	2.5:1	28.6%
Three-quarters pot	2.3:1	30.0%
Full pot	2:1	33.3%
1.5x pot	1.7:1	37.5%
2x pot	1.5:1	40.0%

THE FORMULA

Equity needed = call / (pot + bet + call)

Pot 100, bet 50: $50 / 200 = 25\%$. Call when your equity is higher than the price.

Preflop matchups, all in

HANDS	FIRST	SECOND
AA vs KK Pair vs lower pair	81.9%	18.1%
TT vs A9o Pair vs one overcard	72.2%	27.8%
AA vs 76s Pair vs suited connector	77.5%	22.5%
AKo vs AQo Dominated ace	74.4%	25.6%
AKo vs QJo Two high vs two lower	64.8%	35.2%
QQ vs AKo Pair vs two overcards	56.8%	43.2%
QQ vs AKs Pair vs suited overcards	54.0%	46.0%
22 vs AKs Small pair vs suited AK	50.1%	49.9%

Exact equity over every possible board, ties split, averaged over all suit combinations. s = suited, o = offsuit.

Counting outs honestly

- ♦ An out is a card that makes the best hand. Do not count a card twice: a flush draw with an open-ender is $9 + 8 - 2 = 15$ outs.
- ♦ Discount outs that also help your opponent, such as a flush card that pairs the board against a possible full house.
- ♦ Price one street at a time unless you are all in: compare a single bet with your single-card chance.