

Probability of flopping a set, flush or straight

Flopping things ...	Probability	Formula
<i>Flopping things with a pair</i>		
Flopping a set or better with a pair	11.8% (1 : 7.5)	$1 - \binom{48}{3} \times \binom{50}{3}^{-1}$
Flopping quads with a pair	0.245% (1 : 407)	$48 \times \binom{50}{3}^{-1}$
Flopping an overpair or better with KK	77.4% (3.4 : 1)	$\binom{46}{3} \times \binom{50}{3}^{-1}$
Flopping an overpair or better with QQ	58.6% (1.4 : 1)	$\binom{42}{3} \times \binom{50}{3}^{-1}$
Flopping an overpair or better with JJ	43.0% (1 : 1.3)	$\binom{38}{3} \times \binom{50}{3}^{-1}$
Flopping an overpair or better with TT	30.5% (1 : 2.3)	$\binom{34}{3} \times \binom{50}{3}^{-1}$
<i>Flopping things with suited cards</i>		
Flopping a flush with suited cards	0.842% (1 : 118)	$\binom{11}{3} \times \binom{50}{3}^{-1}$
Flopping a flush draw with suited cards	10.9% (1 : 8.1)	$39 \times \binom{11}{2} \times \binom{50}{3}^{-1}$
Flopping a backdoor flush draw with suited cards	41.6% (1 : 1.4)	$\binom{39}{2} \times 11 \times \binom{50}{3}^{-1}$
<i>Flopping straights and straight-draws</i>		
Flopping a straight with a connector (54 - JT)	1.31% (1 : 76)	$4 \times 4^3 \times \binom{50}{3}^{-1}$
Flopping a straight draw with a connector	9.71% (1 : 9.3)	$(144 + 1632 + 128) \times \binom{50}{3}^{-1}$
Flopping a straight with a one-gapper (53 - QT)	0.980% (1 : 101)	$3 \times 4^3 \times \binom{50}{3}^{-1}$
Flopping a straight draw with a one-gapper	7.67% (1 : 12)	$(96 + 1088 + 128 + 192) \times \binom{50}{3}^{-1}$
<i>Flopping things with unpaired cards</i>		
Flopping quads with two unpaired cards	0.0102% (1 : 9,799)	$2 \times \binom{50}{3}^{-1}$
Flopping a full house with two unpaired cards	0.0612% (1 : 1,632)	$2 \times 6 \times \binom{50}{3}^{-1}$
Flopping trips with two unpaired cards	1.35% (1 : 73)	$2 \times 6 \times 44 \times \binom{50}{3}^{-1}$
Flopping two pair with two unpaired cards (no pair on the board)	2.02% (1 : 48)	$3 \times 3 \times 44 \times \binom{50}{3}^{-1}$
Flopping at least one pair	32.4% (1 : 2.1)	$1 - \binom{44}{3} \times \binom{50}{3}^{-1}$