## Probability of flopping a set, flush or straight

## Hitting the flop

| Flopping things ... | Probability | Formula |
| :---: | :---: | :---: |
| Flopping things with a pair |  |  |
| Flopping a set or better with a pair | $\begin{gathered} 11.8 \% \\ (1: 7.5) \end{gathered}$ | $1-\binom{48}{3} \times\binom{ 50}{3}^{-1}$ |
| Flopping quads with a pair | $\begin{gathered} 0.245 \% \\ (1: 407) \end{gathered}$ | $48 \times\binom{ 50}{3}^{-1}$ |
| Flopping an overpair or better with KK | $\begin{gathered} 77.4 \% \\ (3.4: 1) \end{gathered}$ | $\binom{46}{3} \times\binom{ 50}{3}^{-1}$ |
| Flopping an overpair or better with QQ | $\begin{aligned} & 58.6 \% \\ & (1.4: 1) \end{aligned}$ | $\binom{42}{3} \times\binom{ 50}{3}^{-1}$ |
| Flopping an overpair or better with JJ | $\begin{gathered} 43.0 \% \\ (1: 1.3) \end{gathered}$ | $\binom{38}{3} \times\binom{ 50}{3}^{-1}$ |
| Flopping an overpair or better with TT | $\begin{gathered} \mathbf{3 0 . 5 \%} \\ (1: 2.3) \end{gathered}$ | $\binom{34}{3} \times\binom{ 50}{3}^{-1}$ |
| Flopping things with suited cards |  |  |
| Flopping a flush with suited cards | $\begin{gathered} 0.842 \% \\ (1: 118) \end{gathered}$ | $\binom{11}{3} \times\binom{ 50}{3}^{-1}$ |
| Flopping a flush draw with suited cards | $\begin{gathered} 10.9 \% \\ (1: 8.1) \end{gathered}$ | $39 \times\binom{ 11}{2} \times\binom{ 50}{3}^{-1}$ |
| Flopping a backdoor flush draw with suited cards | $\begin{gathered} 41.6 \% \\ (1: 1.4) \end{gathered}$ | $\binom{39}{2} \times 11 \times\binom{ 50}{3}^{-1}$ |
| Flopping straights and straight-draws |  |  |
| Flopping a straight with a connector (54-JT) | $\begin{aligned} & 1.31 \% \\ & (1: 76) \end{aligned}$ | $4 \times 4^{3} \times\binom{ 50}{3}^{-1}$ |
| Flopping a straight draw with a connector | $\begin{gathered} 9.71 \% \\ (1: 9.3) \end{gathered}$ | $(144+1632+128) \times\binom{ 50}{3}^{-1}$ |
| Flopping a straight with a one-gapper (53-QT) | $\begin{aligned} & 0.980 \% \\ & (1: 101) \end{aligned}$ | $3 \times 4^{3} \times\binom{ 50}{3}^{-1}$ |
| Flopping a straight draw with a one-gapper | $\begin{gathered} 7.67 \% \\ (1: 12) \end{gathered}$ | $(96+1088+128+192) \times\binom{ 50}{3}^{-1}$ |
| Flopping things with unpaired cards |  |  |
| Flopping quads with two unpaired cards | $\begin{gathered} 0.0102 \% \\ (1: 9,799) \end{gathered}$ | $2 \times\binom{ 50}{3}^{-1}$ |
| Flopping a full house with two unpaired cards | $\begin{gathered} 0.0918 \% \\ (1: 1,088) \end{gathered}$ | $2 \times\binom{ 3}{2} \times\binom{ 3}{1} \times\binom{ 50}{3}^{-1}$ |
| Flopping trips with two unpaired cards | $\begin{aligned} & 1.35 \% \\ & (1: 73) \end{aligned}$ | $2 \times 6 \times 44 \times\binom{ 50}{3}^{-1}$ |
| Flopping two pair with two unpaired cards (no pair on the board) | $\begin{aligned} & 2.02 \% \\ & (1: 48) \end{aligned}$ | $3 \times 3 \times 44 \times\binom{ 50}{3}^{-1}$ |
| Flopping at least one pair | $\begin{gathered} 32.4 \% \\ (1: 2.1) \end{gathered}$ | $1-\binom{44}{3} \times\binom{ 50}{3}^{-1}$ |

