Scenario	Probability	Formula
Double aces		
Being dealt aces preflop	**0.452%** (1 : 220)	$6 \times \binom{52}{2}^{-1}$
If you have aces preflop your opponent has aces as well *(heads-up)*	**0.0816%** (1 : 1,224)	$\binom{50}{2}^{-1}$
If you have aces preflop an opponent has aces as well *(full-ring)*	**0.651%** (1 : 153)	$1 - \left(1 - \binom{50}{2}^{-1}\right)^8$
Kings vs. aces		
If you have kings preflop your opponent has aces *(heads-up)*	**0.490%** (1 : 203)	$6 \times \binom{50}{2}^{-1}$
If you have kings preflop an opponent has aces *(full-ring)*	**3.85%** (1 : 25)	$1 - \left(1 - 6 \times \binom{50}{2}^{-1}\right)^8$
You are dealt kings and your opponent has aces *(heads-up)*	**0.00222%** (1 : 45,120)	$6 \times \binom{52}{2}^{-1} \times 6 \times \binom{50}{2}^{-1}$
You are dealt kings and someone has aces *(full-ring)*	**0.0174%** (1 : 5,737)	$6 \times \binom{52}{2}^{-1} \times \left(1 - \left(1 - 6 \times \binom{50}{2}^{-1}\right)^8\right)$
Queens vs. aces or kings		
If you have queens preflop your opponent has kings or aces *(heads-up)*	**0.980%** (1 : 101)	$2 \times 6 \times \binom{50}{2}^{-1}$
If you have queens preflop an opponent has kings or aces *(full-ring)*	**7.57%** (1 : 12)	$1 - \left(1 - 2 \times 6 \times \binom{50}{2}^{-1}\right)^8$
You are dealt queens and your opponent has aces or kings *(heads-up)*	**0.00443%** (1 : 22,559)	$6 \times \binom{52}{2}^{-1} \times 2 \times 6 \times \binom{50}{2}^{-1}$
You are dealt queens and someone has aces or kings *(full-ring)*	**0.0343%** (1 : 2,917)	$6 \times \binom{52}{2}^{-1} \times \left(1 - \left(1 - 2 \times 6 \times \binom{50}{2}^{-1}\right)^8\right)$
Jacks vs. better pairs		
If you have jacks preflop your opponent has a better pair *(heads-up)*	**1.31%** (1 : 76)	$3 \times 6 \times \binom{50}{2}^{-1}$
If you have jacks preflop an opponent has a better pair *(full-ring)*	**11.2%** (1 : 8.0)	$1 - \left(1 - 2 \times 6 \times \binom{50}{2}^{-1}\right)^8$
You are dealt jacks and your opponent has a better pair *(heads-up)*	**0.00665%** (1 : 15,039)	$6 \times \binom{52}{2}^{-1} \times 3 \times 6 \times \binom{50}{2}^{-1}$
You are dealt jacks and someone has a better pair *(full-ring)*	**0.0505%** (1 : 1,978)	$6 \times \binom{52}{2}^{-1} \times \left(1 - \left(1 - 3 \times 6 \times \binom{50}{2}^{-1}\right)^8\right)$
Ace-king vs. aces or kings		
If you have ace-king preflop your opponent has kings or aces *(heads-up)*	**0.490%** (1 : 203)	$2 \times 3 \times \binom{50}{2}^{-1}$
If you have ace-king preflop an opponent has kings or aces *(full-ring)*	**3.85%** (1 : 25)	$1 - \left(1 - 2 \times 3 \times \binom{50}{2}^{-1}\right)^8$
Ace-queen vs. queens+ or ace-king		
If you have ace-queen preflop your opponent has queens+ or ace-king *(heads-up)*	**1.96%** (1 : 50)	$(3 + 6 + 3 + 12) \times \binom{50}{2}^{-1}$
If you have ace-queen preflop an opponent has queens+ or ace-king *(full-ring)*	**14.6%** (1 : 5.8)	$1 - \left(1 - (3 + 6 + 3 + 12) \times \binom{50}{2}^{-1}\right)^8$
Ace-jack vs. jacks+ or ace-queen+		
If you have ace-jack preflop your opponent has jacks+ or ace-queen *(heads-up)*	**3.43%** (1 : 28)	$(3 + 2 \times 6 + 3 + 2 \times 12) \times \binom{50}{2}^{-1}$
If you have ace-jack preflop an opponent has jacks+ or ace-jack *(full-ring)*	**24.4%** (1 : 3.1)	$1 - \left(1 - (3 + 2 \times 6 + 3 + 2 \times 12) \times \binom{50}{2}^{-1}\right)^8$

heads-up: playing against one opponent; **full-ring**: playing at a table with 9 players