A Note on Probability

1. The probability of your getting 10♣, J♥, Q♦, K♣, and A♣ from a full deck in the first five draws:

\[
\frac{5}{52} \times \frac{4}{51} \times \frac{3}{50} \times \frac{2}{49} \times \frac{1}{48} = 3.85 \times 10^{-7}
\]

2. The probability of your getting the same cards when there are three players and you have first draw:

\[
\frac{5}{52} \times \frac{47}{51} \times \frac{46}{50} \times \frac{45}{49} \times \frac{44}{48} \times \frac{3}{47} \times \frac{43}{46} \times \frac{42}{45} \times \frac{2}{44} \times \frac{41}{43} \times \frac{40}{42} \times \frac{1}{41} = 3.85 \times 10^{-7}
\]

So the number of players doesn’t matter.

3. The probability of your getting the same cards when there are three players and you have last draw:

\[
\frac{47}{52} \times \frac{46}{51} \times \frac{5}{50} \times \frac{45}{49} \times \frac{44}{48} \times \frac{43}{47} \times \frac{42}{46} \times \frac{3}{45} \times \frac{41}{44} \times \frac{40}{43} \times \frac{2}{42} \times \frac{39}{41} \times \frac{38}{40} \times \frac{1}{39} = 3.85 \times 10^{-7}
\]

So the order of dealing doesn’t matter, either.