Question #10346

given a standard deck of 52 cards, 3 cards are dealt without replacement, what is the probability that all three cards are queens?.

Solution. First, calculate the number of possible variants of getting a set of 3 cards, it equals $\binom{52}{3}$, the number of possible variants of getting a set of 3 queens equals $\binom{4}{3} = 4$, thus the desired probability $p = \dfrac{4}{\binom{52}{3}} = \dfrac{4}{22100} \approx 0.00018$.

Answer $\dfrac{4}{22100} \approx 0.00018$.