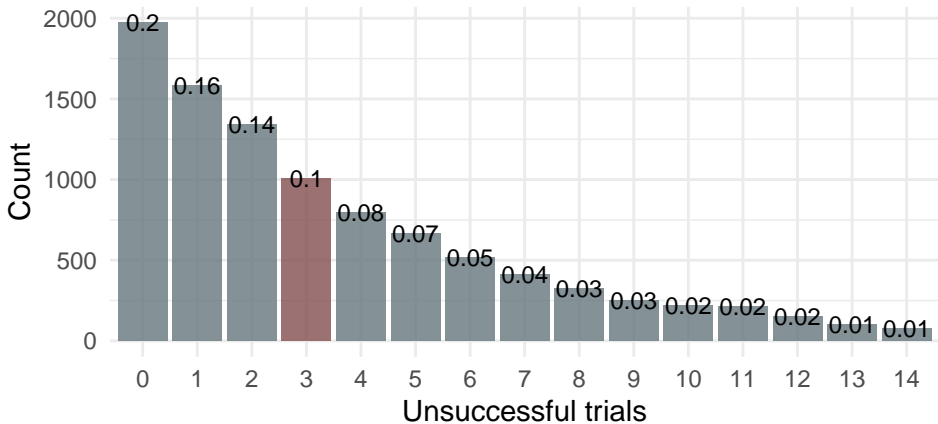Distribution of trials prior to first success

$P(X = 3) \mid X \sim G(.2) = 0.1024$

simulation of n = 10,000 samples from geometric dist.