# Assume Independence to Obtain Simple Factors

**prob(R|N AND I AND F)** $\approx$
**prob(N AND I AND F | R) × prob (R)**

To simplify, we can make the **naïve assumption** that **factors N, I, and F are independent**: in context, that exactly the same fraction of domestic and imported red cars are new, for example. We assume…

**prob(N AND I AND F | R) =**
**prob(N|R) × prob(I|R) × prob(F|R).**