\[ P(G) = \]
\[ P(W|R) = \]
\[ P(W|G) = \]
\[ P(B) = \]
\[ P(W) = \]
\[ P(RB) + P(RW) + P(GB) + P(GW) = \]

\[ P(Y) = \]
\[ P(B|Y) = \]
\[ P(B|\Xi) = \]
\[ P(X \cap A) = P(X) \times P(A|X) = \]
\[ P(Y \cap A) = P(Y) \times P(A|Y) = \]
\[ P(\Xi \cap A) = P(\Xi) \times P(A|\Xi) = \]
\[ P(A) = P(X \cap A) + P(Y \cap A) + P(\Xi \cap A) = \]
\[ P(B) = \]
\[ P(X|A) = \frac{P(X)}{P(\_)} \]
\[ P(\Xi|A) = \frac{P(\Xi)}{P(\_)} \]
16.5 Conditional Probability Problem

Facts: In a certain population, 60% of females live to at least age 75 (≥ 75); 42% of males live to at least age 75. The general population is 52% female and 48% male.

Determine the probability that a 75 year old person is female. I.e. find $P(\text{female})$?

Construct a diagram representing the facts:

Calculate $P(\text{female}) =$