\begin{align*}
\Pr(r = y, s = y) &= 0.2 \\
\Pr(s = y | r = y) &= 0.1 \\
\Pr(h = y | r = y, s = y) &= 1.0 \\
\Pr(h = y | r = y, s = n) &= 1.0 \\
\Pr(h = y | r = n, s = y) &= 0.9 \\
\Pr(h = y | r = n, s = n) &= 0.0 \\

\text{Holmes' Evidence:} \\
\Pr(r, s | h = y) &= \frac{\Pr(r, s, h = y)}{\Pr(h = y)} \\
\Pr(r, s, h) &= \sum_w \Pr(r, s, h, w) = \Pr(r) \Pr(s) \Pr(h | r, s) \sum_w \Pr(w | r) \\
&= \Pr(r) \Pr(s) \Pr(h | r, s) \\
\Pr(r = y, s = y, h = y) &= 0.2 \times 0.1 \times 1.0 = 0.02 \\
\Pr(r = y, s = n, h = y) &= 0.2 \times 0.9 \times 1.0 = 0.18 \\
\Pr(r = n, s = y, h = y) &= 0.8 \times 0.1 \times 0.9 = 0.072 \\
\Pr(r = n, s = n, h = y) &= 0.8 \times 0.9 \times 0.0 = 0 \\
\Pr(h = y) &= 0.272 \\
\Pr(r = y, s = y | h = y) &= \frac{0.02}{0.272} = 0.074 \\
\Pr(r = y, s = n | h = y) &= \frac{0.18}{0.272} = 0.662
\end{align*}
\[ p(r = n, s = y \mid \bar{h} = y) = \frac{0.072}{0.272} = 0.264 \]

\[ p(r = n, s = n \mid \bar{h} = y) = \frac{0}{0.272} = 0.0 \]

**Marginals**

\[ p(r = y \mid \bar{h} = y) = \sum_s p(r = y, s \mid \bar{h} = y) = 0.074 + 0.662 = 0.736 \]

\[ p(s = y \mid \bar{h} = y) = \sum_r p(r, s = y \mid \bar{h} = y) = 0.074 + 0.264 = 0.338 \]

Note also that

\[ p(r = y, s = y \mid \bar{h} = y) \neq p(r = y \mid \bar{h} = y) \cdot p(s = y \mid \bar{h} = y) \]

\[ 0.074 \neq 0.736 \times 0.338 = 0.249 \]

i.e. \( r \) and \( s \) are conditionally dependent