

$$\begin{aligned}
P(\textit{Cutremur}|\textit{Alarma}) &= \frac{P(\textit{Alarma}|\textit{Cutremur})P(\textit{Cutremur})}{P(\textit{Alarma})} \\
P(\textit{Alarma}|\textit{Cutremur}) &= \frac{98}{100} \\
P(\textit{Cutremur}) &= \frac{0.05}{100} \\
P(\textit{Alarma}) &= P(\textit{Alarma}|\textit{Cutremur})P(\textit{Cutremur}) + P(\textit{Alarma}|\neg\textit{Cutremur})P(\neg\textit{Cutremur}) = \\
&= \frac{98}{100} \times \frac{0.05}{100} + \frac{2}{100} \times \frac{99.95}{100} = \frac{4.9}{10000} + \frac{199.9}{10000} = \frac{204.8}{10000} = 0.02048 \\
P(\textit{Cutremur}|\textit{Alarma}) &= \frac{0.98 \times 0.0005}{0.02048} = \frac{0.0049}{0.02048} = 0.2392
\end{aligned}$$

$$\begin{aligned}
P(\textit{Incendiu}|\neg\textit{Alarma}) &= \frac{P(\neg\textit{Alarma}|\textit{Incendiu})P(\textit{Incendiu})}{P(\neg\textit{Alarma})} \\
P(\neg\textit{Alarma}|\textit{Incendiu}) &= 0.05 \\
P(\textit{Incendiu}) &= 0.01 \\
P(\neg\textit{Alarma}) &= P(\neg\textit{Alarma}|\textit{Incendiu})P(\textit{Incendiu}) + P(\neg\textit{Alarma}|\neg\textit{Incendiu})P(\neg\textit{Incendiu}) = \\
&= 0.05 \times 0.01 + 0.02 \times 0.99 = 0.0203 \\
P(\textit{Incendiu}|\neg\textit{Alarma}) &= \frac{0.98 \times 0.01}{0.0203} = 0.48275
\end{aligned}$$