$$\Pr\{A\}=0.6$$

$$\Pr\{B|A\}=0.09$$

$$\Pr\left\{B|A^C\right\}=0.2$$

$$\begin{aligned}\Pr\{B\}&=\Pr\left\{(B\cap A)\cup\left(B\cap A^C\right)\right\}\\&=\Pr\{B\cap A\}+\Pr\left\{B\cap A^C\right\}\\&=\Pr\{B|A\}\Pr\{A\}+\Pr\left\{B|A^C\right\}\Pr\left\{A^C\right\}\\&=0.09\times0.6+0.2\times0.4\\&=0.134\end{aligned}$$

$$\Pr\{A|B\}=\frac{\Pr\{A\}}{\Pr\{B\}}\times\Pr\{B|A\}=\frac{0.6}{0.134}0.09=0.402985$$