## Quiz 2

Pollution of the rivers in the United States has been a problem for many years. Consider the following events:

$$
\begin{aligned}
& A=\{\text { The river is polluted. }\} \\
& B=\{\text { A sample of water tested detects pollution. }\}
\end{aligned}
$$

Assume $P(A)=0.3, P(B \mid A)=0.75, P\left(B \mid A^{\prime}\right)=0.20$.
(a) Find $P(A \cap B)$.
(b) Find $P\left(A^{\prime} \cap B\right)$.
(c) Find $P(A \mid B)$.

