Assignment 1

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Download all python codes from

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and latex-tikz codes from

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1 Problem

(Misc 6.23) Given that E and F are events such that $\Pr(E) = 0.6$, $\Pr(F) = 0.3$ and $\Pr(EF) = 0.2$, find $\Pr(E|F)$ and $\Pr(F|E)$

2 Solution

By definition,

$$\Pr(A|B) = \frac{\Pr(AB)}{\Pr(B)} \tag{2.0.1}$$

Thus, we can write:

$$\Pr(E|F) = \frac{\Pr(EF)}{\Pr(F)} = \frac{0.2}{0.3} = \frac{2}{3} \tag{2.0.2}$$

In a similar manner:

$$\Pr(F|E) = \frac{\Pr(EF)}{\Pr(E)} = \frac{0.2}{0.6} = \frac{1}{3} \tag{2.0.3}$$