Probability Assignment -I

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I. Problem

Given that E and F are events such that P(E)=0.6, P(F)=0.3 and P(E F)=0.2, find P(E|F) and P(F|E).

II. Solution

$$P(E|F) = \frac{P(EF)}{P(F)} = \frac{0.2}{0.3} = \frac{2}{3} \tag{1}$$

$$P(F|E) = \frac{P(EF)}{P(E)} = \frac{0.2}{0.6} = \frac{1}{3} \tag{2}$$