Assignment 1

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1) If $\Pr(A) = \frac{1}{2}$, $\Pr(B) = 0$, then $\Pr(A \mid B)$ is
   a) 0
   b) $\frac{1}{2}$
   c) not defined
   d) 1

   Solution: Given that the probability of event B occurring is zero i.e., event B does not occur. But the following expression

   $$\Pr(A \mid B) \tag{0.0.1}$$

   describes the probability of event A occurring given that event B occurred. Hence

   $$\Pr(A \mid B) \text{ is not defined} \tag{0.0.2}$$