

1.) Sufficiency: $P(Y|B,A) = P(Y|B)$

let us take $y=1, R=1, A=a$. Then

$$P(Y=1 | R=1, A=a) = \frac{P(Y=1, R=1, A=a)}{P(R=1, A=a)} = \frac{0.3}{0.3+0.025} \approx 0.92$$

$$P(Y=1 | R=1) = \frac{P(Y=1, R=1)}{P(R=1)} = \frac{0.3+0.3}{0.3+0.05+0.025+0.3} \approx 0.89$$

$$\Rightarrow P(Y=1 | R=1, A=a) \neq P(Y=1 | R=1)$$

\therefore sufficiency is not satisfied.