Question 4

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September 21, 2019

$$P(W) = \frac{8}{19} \tag{1}$$

$$P(R) = \frac{11}{18} \tag{2}$$

The probability of $P(R|W)$ is the probability of plucking a red rose the second draw given that the first rose plucked was a white rose. This probability is calculated as:

$$P(R|W) = \frac{P(R) * P(W)}{P(W)} \rightarrow P(R) \tag{3}$$

The probability of $P(W|R)$ is the probability of plucking a white rose given the red rose has been plucked in the second draw. This probability is calculated as:

$$P(W|R) = \frac{P(W) * P(R)}{P(R)} \rightarrow P(W) \tag{4}$$

The values of these two conditional probabilites are not the same.