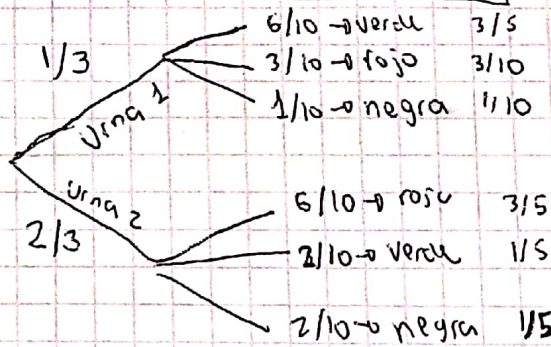
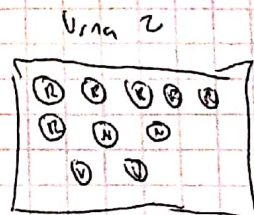
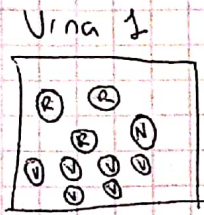


→ 2.



$$P(V \cap U_1) = P(V|U_1) \times P(U_1) = \frac{3}{5} \times \frac{1}{3} = \frac{1}{5}$$

$$P(R \cap U_1) = P(R|U_1) \times P(U_1) = \frac{3}{10} \times \frac{1}{3} = \frac{1}{10}$$

$$P(N \cap U_1) = P(N|U_1) \times P(U_1) = \frac{1}{10} \times \frac{1}{3} = \frac{1}{30}$$

$$P(R \cap U_2) = P(R|U_2) \times P(U_2) = \frac{3}{5} \times \frac{2}{3} = \frac{2}{5}$$

$$P(V \cap U_2) = P(V|U_2) \times P(U_2) = \frac{1}{5} \times \frac{2}{3} = \frac{2}{15}$$

$$P(N \cap U_2) = P(N|U_2) \times P(U_2) = \frac{1}{5} \times \frac{2}{3} = \frac{2}{15}$$

a) $P(R) = P(R \cap U_1) + P(R \cap U_2) = \frac{1}{10} + \frac{4}{10} = \frac{5}{10} = \frac{1}{2}$

b) $P(N) = P(N \cap U_1) + P(N \cap U_2) = \frac{1}{30} + \frac{2}{15} = \frac{5}{30} = \frac{1}{6}$

c) $P(U_1|N) = \frac{P(N \cap U_1)}{P(N)} = \frac{(1/30)}{(1/6)} = \frac{1}{5}$

d) $P(U_2|R) = \frac{P(R \cap U_2)}{P(R)} = \frac{(2/5)}{(1/2)} = \frac{4}{5}$