2. $D = \{1,2,3,4,5,6\}$

1bola de u_1 si $D = \{1\} \vee \{2\}$

1bola de u_2 si $D = D - \{1,2\}$

$u_1 : 3R, 1N, 6V \qquad u_2 : 6R, 2N, 2V$

a) $P(R) = ?$

$$P(R) = P(R|u_1)P(u_1) + P(R|u_2)P(u_2)$$

$$= \frac{3}{10}\left(\frac{2}{6}\right) + \frac{6}{10}\left(\frac{2}{6}\right) = \frac{1}{10} + \frac{2}{5} = \frac{1}{10} + \frac{4}{10} = \frac{5}{10} = \frac{1}{2}$$

b) $P(N) = ?$

$$P(N) = P(N|u_1)P(u_1) + P(N|u_2)P(u_2)$$

$$= \left(\frac{1}{10}\right)\left(\frac{2}{6}\right) + \left(\frac{2}{10}\right)\left(\frac{4}{6}\right)$$

$$= \frac{2}{60} + \frac{8}{60} = \frac{10}{60} = \frac{1}{6}$$

c) $P(u_1/N) = \dfrac{P(N/u_1)P(u_1)}{P(N/u_1)P(u_1) + P(N/u_2)P(u_2)}$

$$= \frac{\frac{1}{10}\left(\frac{2}{6}\right)}{\frac{1}{10}\left(\frac{2}{6}\right) + \frac{2}{10}\left(\frac{4}{6}\right)} = \frac{\frac{2}{60}}{\frac{2+8}{60}} = \frac{2}{10} = \frac{1}{5}$$

d) $P(u_2/N) = \dfrac{P(N/u_2)P(u_2)}{P(N/u_2)P(u_2) + P(N/u_1)P(u_1)}$

$$= \frac{\frac{2}{10}\left(\frac{4}{6}\right)}{\frac{2}{10}\left(\frac{4}{6}\right) + \frac{1}{10}\left(\frac{2}{6}\right)} = \frac{\frac{8}{60}}{\frac{10}{60}} = \frac{8}{10} = \frac{4}{5}$$