

$$\begin{aligned}
 2. \quad a) \quad P(R) &= P(u_1) \cdot P(R/u_1) + P(u_2) \cdot P(R/u_2) \\
 &= \frac{\cancel{2}^1}{\cancel{6}_2} \cdot \frac{\cancel{2}^2}{\cancel{10}_5} + \frac{\cancel{4}^2}{\cancel{6}_3} \cdot \frac{\cancel{6}}{\cancel{10}_5} = \frac{1}{10} + \frac{2}{5} = \frac{5}{10} = \frac{1}{2} \quad p
 \end{aligned}$$

$$\begin{aligned}
 b) \quad P(N) &= P(u_1) \cdot P(N/u_1) + P(u_2) \cdot P(N/u_2) \\
 &= \frac{\cancel{2}^1}{\cancel{6}_3} \cdot \frac{1}{10} + \frac{\cancel{4}^2}{\cancel{6}_3} \cdot \frac{\cancel{2}^2}{\cancel{10}_5} = \frac{1}{30} + \frac{2}{15} = \frac{5}{30} = \frac{1}{6} \quad p
 \end{aligned}$$

$$c) \quad P(1/N) = \frac{P(u_1 \cap N)}{P(N)} = \frac{\frac{2}{6} \cdot \frac{1}{10}}{\frac{1}{6}} = \frac{1}{5} \quad p$$

$$d) \quad P(2/N) = 1 - P(1/N) = 1 - \frac{1}{5} = \frac{4}{5} \quad p$$