2. a) $P(R) = P(U_1) \cdot P(R/U_1) + P(U_2) \cdot P(R/U_2)$

$= \frac{2}{6} \cdot \frac{3}{10} + \frac{4}{6} \cdot \frac{6}{10} = \frac{1}{10} + \frac{2}{5} = \frac{5}{10} = \frac{1}{2}$ p

b) $P(N) = P(U_1) \cdot P(N/U_1) + P(U_2) \cdot P(N/U_2)$

$= \frac{2}{6} \cdot \frac{1}{10} + \frac{4}{6} \cdot \frac{2}{10} = \frac{1}{30} + \frac{2}{15} = \frac{5}{30} = \frac{1}{6}$ p

c) $P(1/N) = \frac{P(U_1 \cap N)}{P(N)} = \frac{\frac{2}{6} \cdot \frac{1}{10}}{\frac{1}{6}} = \frac{1}{5}$ p

d) $P(2/N) = 1 - P(U_1/N) = 1 - \frac{1}{5} = \frac{4}{5}$ p