

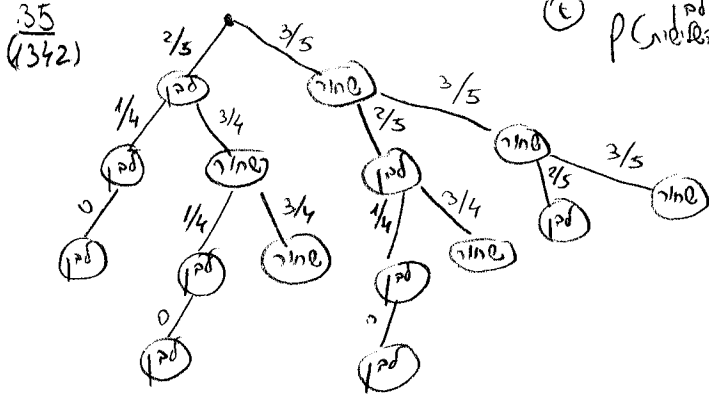
$\frac{34}{(1342)} \quad (c) \quad P(P_{12}^2) = \frac{15}{35} \cdot \frac{14}{34} \cdot \frac{13}{33} = \frac{13}{187}$

$$\textcircled{5} P(\text{3rd } 55, 1^{\text{st}}) = P(1^{\text{st}} | 55) + P(55 | 1^{\text{st}}) + P(83 | 1^{\text{st}}) + P(4 | 1^{\text{st}}) = \frac{20}{35} \cdot \frac{19}{34} \cdot \frac{18}{33} + \frac{15}{35} \cdot \frac{20}{34} \cdot \frac{19}{33} + \frac{20}{35} \cdot \frac{15}{34} \cdot \frac{19}{33} + \frac{20}{35} \cdot \frac{19}{34} \cdot \frac{15}{33} = \frac{114}{187}$$

$$⑤ \quad P(\text{unk} \mid \text{unk}) = 1 - P(\text{ok} \mid \text{unk}) - P(\text{unk} \mid \text{ok}) = 1 - \frac{13}{187} - \frac{20}{35} \cdot \frac{19}{34} \cdot \frac{18}{33} = \frac{90}{119}$$

$$(c) \rho(\text{red}) = \frac{2}{5} \cdot \frac{3}{4} \cdot \frac{1}{4} + \frac{3}{5} \cdot \frac{2}{5} \cdot \frac{1}{4} + \frac{3}{5} \cdot \frac{3}{5} \cdot \frac{2}{5} = \frac{279}{1000}$$

$$\textcircled{5} \quad p(p|p^{\text{ic}}) = \frac{2}{5} \cdot \frac{1}{4} + \frac{2}{5} \cdot \frac{3}{4} \cdot \frac{1}{4} + \frac{3}{5} \cdot \frac{2}{5} \cdot \frac{1}{4} = \frac{47}{200}$$



① $P(\frac{36}{1342}) = P(\frac{36}{1342}) = P(\text{black, black, red}) + P(\text{black, red, black}) + P(\text{red, black, black}) = \frac{2}{7} \cdot \frac{1}{6} \cdot \frac{1}{5} + \frac{2}{7} \cdot \frac{5}{6} \cdot \frac{1}{5} + \frac{5}{7} \cdot \frac{2}{6} \cdot \frac{1}{5} = \frac{1}{7}$

$$(7) \quad P\left(\frac{1}{2}, \frac{1}{3}, \frac{1}{6}\right) = 1 - P\left(\frac{1}{2}, \frac{1}{3}\right) = 1 - \frac{5}{7} \cdot \frac{4}{6} \cdot \frac{3}{5} = \frac{5}{7}$$

$$(8) \quad p\left(\frac{1}{2} | \frac{1}{2}\right) = p\left(\frac{1}{2} | \frac{1}{2}\right) = \frac{1}{2}$$

$$(2) \textcircled{1} P(A) = \frac{5}{7}, \quad P(B) = P(\text{black, black, red}) + P(\text{black, red, red}) + P(\text{red, black, red}) + P(\text{red, red, red}) = \frac{2}{7} \cdot \frac{1}{6} \cdot 1 + \frac{2}{7} \cdot \frac{5}{6} \cdot \frac{4}{5} + \frac{5}{7} \cdot \frac{2}{6} \cdot \frac{4}{5} + \frac{5}{7} \cdot \frac{4}{6} \cdot \frac{3}{5} = \frac{5}{7}$$

$$(2) P(A \cap B) = P(\text{red, white, red}) + P(\text{red, red, red}) = \frac{5}{7} \cdot \frac{2}{6} \cdot \frac{4}{5} + \frac{5}{7} \cdot \frac{4}{6} \cdot \frac{3}{5} = \frac{10}{21} \neq P(A) \cdot P(B)$$

red white red red red red

$\frac{37}{(1342)} \text{ (a) } P(\text{ball}) = P(\text{red}) + P(\text{blue}) + P(\text{green}) = \frac{4}{16} \cdot \frac{3}{15} \cdot \frac{2}{14} + \frac{5}{16} \cdot \frac{4}{15} \cdot \frac{3}{12} + \frac{7}{16} \cdot \frac{6}{15} \cdot \frac{5}{14} = \frac{7}{80}$

$$\textcircled{2} P_{\text{抽到3个球}} = P(r, l, l) + P(l, r, l) + P(l, l, r) = \frac{4}{16} \cdot \frac{5}{15} \cdot \frac{4}{14} + \frac{5}{16} \cdot \frac{4}{15} \cdot \frac{4}{14} + \frac{5}{16} \cdot \frac{4}{15} \cdot \frac{4}{14} = \frac{1}{14}$$

$$\frac{38}{1342} \quad p(\text{מחור}) = p(\text{מחור, מחור}) + p(\text{מחור, מחור}) = \frac{4}{7} \cdot \frac{4}{7} + \frac{3}{7} \cdot \frac{2}{7} = \frac{22}{49}$$

$$\frac{.39}{(1342)} \text{ (d) } P\left(\begin{smallmatrix} 111 \\ 115 \end{smallmatrix}\right) = P(115, 115) = \frac{4}{9} \cdot \frac{3}{8} = \frac{1}{6}$$

⑦ $P\left(\frac{11}{12} \leq \frac{12}{11}\right) = 1 - P\left(\frac{11}{12} \leq \frac{12}{11}\right) = 1 - \frac{5}{9} \cdot \frac{4}{8} = \frac{13}{18}$