

$$\textcircled{2} \quad \textcircled{a} \quad \frac{\binom{6}{2} \binom{4}{1}}{\binom{10}{3}} = \frac{1}{2}$$

$$\textcircled{c} \quad 1 - \frac{\binom{8}{1}}{120} = \frac{119}{120}$$

$$\textcircled{3} \quad \textcircled{b} \quad P(2^{\text{nd}} R) = \overset{R}{\frac{3}{10}} \cdot \overset{R}{\frac{2}{9}} + \overset{W}{\frac{3}{10}} \cdot \overset{R}{\frac{1}{3}} + \overset{B}{\frac{2}{5}} \cdot \overset{R}{\frac{1}{3}}$$

$$= \frac{3}{10}$$

$$\textcircled{c} \quad P(1^{\text{st}} R \mid 2^{\text{nd}} R) = \frac{P(1^{\text{st}} R \cap 2^{\text{nd}} R)}{P(2^{\text{nd}} R)}$$

$$= \frac{\frac{3}{10} \cdot \frac{2}{9}}{\frac{3}{10}} = \frac{2}{9}$$

$$\textcircled{4} \quad P(A \cup B) = P(A) + P(B) - P(A \cap B)$$

$$0.28 = P(A) + 0.2 - P(A) \cdot (0.2)$$

$$0.08 = 0.8 P(A)$$

$$\frac{1}{10} = \frac{0.08}{0.8} = P(A)$$

