

総合演習 2

(4)

別解

$$\begin{aligned}P(A \cap B) &= 1 - P(\overline{A \cap B}) \\P(\overline{A \cap B}) &= P(\overline{A}) + P(\overline{B}) - P(\overline{A} \cap \overline{B}) \\&= \left(\frac{5}{6}\right)^n + \left(\frac{1}{2}\right)^n - \left(\frac{1}{3}\right)^n\end{aligned}$$

より,

$$P(A \cap B) = 1 - \left(\frac{5}{6}\right)^n - \left(\frac{1}{2}\right)^n + \left(\frac{1}{3}\right)^n$$