

Solutions for problem 32-1

(a[a])

$$\begin{aligned}\text{exactly 1 ace} &= 5 \left(\frac{4}{52} \cdot \frac{48}{51} \cdot \frac{47}{50} \cdot \frac{46}{49} \cdot \frac{45}{48} \right) \\ &= 5(0.0599) \\ &= 0.2995\end{aligned}$$

(a[b])

$$\begin{aligned}1 - P^c &= 1 - \left(\frac{48}{52} \cdot \frac{47}{51} \cdot \frac{46}{50} \cdot \frac{45}{49} \cdot \frac{44}{48} \right) \\ &= 0.3412\end{aligned}$$

(b)

$$\begin{aligned}1 - P^c &= 1 - \left(\frac{6}{6} \cdot \frac{5}{6} \cdot \frac{4}{6} \cdot \frac{3}{6} \cdot \frac{2}{6} \right) \\ &= 1 - \left(\frac{720}{7776} \right) \\ &= 0.9074\end{aligned}$$