

$$2 - P_2(\text{carte 1 ou carte 2 est coeur}) =$$

$$P(\text{carte 1 est coeur}) + P(\text{carte 2 coeur}) - P(\text{carte 1 et carte 2 coeur})$$

$$P(\text{carte 2 coeur}) = \frac{4}{52}$$

$$\begin{aligned} P(\text{carte 2 coeur}) &= P(\text{carte 2 coeur} / \text{carte 1 coeur}) P(\text{carte 1 coeur}) \\ &\quad + P(\text{carte 2 coeur} / \text{carte 1 pas coeur}) P(\text{carte 1 pas coeur}) \\ &= \frac{3}{51} \times \frac{4}{52} + \frac{4}{51} \times \frac{48}{52} \\ P(\text{carte 1 et 2 coeur}) &= \end{aligned}$$

$$P(\text{carte 1 coeur}) \times P(\text{carte 2 coeur} / \text{carte 1 coeur})$$

$$\frac{3}{51} \times \frac{4}{52}$$

$$\text{reponse} = \frac{4}{52} + \frac{4}{51} \times \frac{48}{52}$$

$$3 \quad P(\text{écher, première}) = 1 - .75 = .25$$

$$P(\text{écher, deuxième}) = 1 - .80 = .20, \text{ si indépendants}$$

$$P(2 \text{ échecs}) = .25 \times .20 = .05$$

$$4 \quad P(A \text{ bat } B) = .6^3 (1 - .6)^1 \binom{4}{3} =$$

$$.6^3 \binom{4}{3} \frac{4!}{3!(4-3)!} = .6^3 \times 4 \times 4$$