

Exercice 19  $\Omega$  : "main de 5 cartes"

$$|\Omega| = C_{32}^5$$

$X$  : nb de cœur dans la main

$$X(\Omega) = [0, 5]$$

$$\textcircled{a} X = 0$$

$$P(X=0) = \frac{C_{24}^5}{C_{32}^5} = \frac{42\,504}{201\,376} \approx 0,21$$

$$\textcircled{a} P(X=1) = \frac{C_8^1 \times C_{24}^4}{C_{32}^5} = \frac{85\,008}{1021} \approx 0,42$$

$$\textcircled{a} P(X=2) = \frac{C_8^2 \times C_{24}^3}{C_{32}^5} = \frac{56\,676}{1021} \approx 0,28$$

$$\textcircled{a} P(X=3) = \frac{C_8^3 \times C_{24}^2}{C_{32}^5} = \frac{15\,456}{1021} \approx 0,077$$

$$\textcircled{a} P(X=4) = \frac{C_8^4 \times C_{24}^1}{C_{32}^5} = \frac{1\,680}{1021} \approx 0,0083$$

$$\textcircled{a} P(X=5) = \frac{C_8^5}{C_{32}^5} = \frac{56}{1021} \approx 0,00028$$

$$\text{Rq: } \sum_{i=0}^n P(X=i) = 1$$

$$P(X=i) = \frac{C_8^i \times C_{24}^{5-i}}{C_{32}^5}$$