

3	4
B	N

$$P(\text{almeno 1 nera}) = ?$$

$$P(P(\text{"1 nera"} \cup \text{"2 nere"})) =$$

$$= P(1 \text{ nera}) + P(2 \text{ nere})$$

$$= \frac{\binom{3}{1} \binom{4}{1}}{\binom{7}{2}} + \frac{\binom{3}{0} \binom{4}{2}}{\binom{7}{2}} = \frac{3 \cdot 4}{21} + \frac{1 \cdot 6}{21} = \frac{12 + 6}{21} = \frac{18}{21} = \frac{6}{7}$$

$$\rightarrow 1 - \frac{1}{7} = \frac{6}{7}$$

$$P(\text{almeno 1 nera}) = 1 - P(\text{nessuna nera}) = 1 - P(2 \text{ bianche}) = 1 - \frac{\binom{3}{2} \binom{4}{0}}{\binom{7}{2}} = 1 - \frac{3 \cdot 1}{21} = \frac{6}{7}$$