1 σ-field
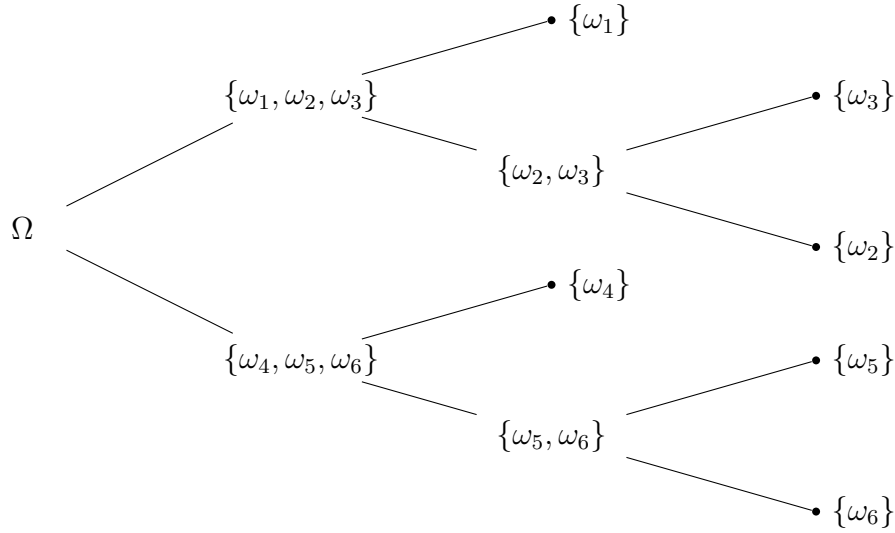

$$\mathcal{F}_0, \mathcal{F}_1 = \sigma(X_0, X_1) = \{\{\omega_1, \omega_2, \omega_3\}, \{\omega_4, \omega_5, \omega_6\}, \phi, \Omega\}$$

$$\mathcal{F}_2 = \sigma(X_0, X_1, X_2) = \{\omega_1, \omega_4, \{\omega_2, \omega_3, \omega_4, \omega_5, \omega_6\}, \{\omega_1, \omega_2, \omega_3, \omega_5, \omega_6\}\{\omega_1, \omega_2, \omega_3\}, \{\omega_4, \omega_5, \omega_6\},$$
$$\{\omega_2, \omega_3, \omega_5, \omega_6\}, \{\omega_1, \omega_4\}, \{\omega_1, \omega_4, \omega_5, \omega_6\}, \{\omega_2, \omega_3\}, \{\omega_5, \omega_6\}, \{\omega_1, \omega_2, \omega_3, \omega_4\},$$
$$\{\omega_1, \omega_5, \omega_6\}, \{\omega_2, \omega_3, \omega_4\}\phi, \Omega\}$$

$$\mathcal{F}_3 = \sigma(X_0, X_1, X_2, X_3) = \{\omega_1, \omega_2, \cdots, \phi, \Omega\}$$

2   Stopping time

$$\tau_1(\omega_i) = \begin{cases} 1, & i = 1, 2, 3 \\ 2, & i = 4 \\ 3, & i = 5, 6 \end{cases} \qquad \tau_2(\omega_i) = \begin{cases} 1, & i = 1 \\ 2, & i = 2, 3 \\ 3, & i = 4, 5, 6 \end{cases}$$