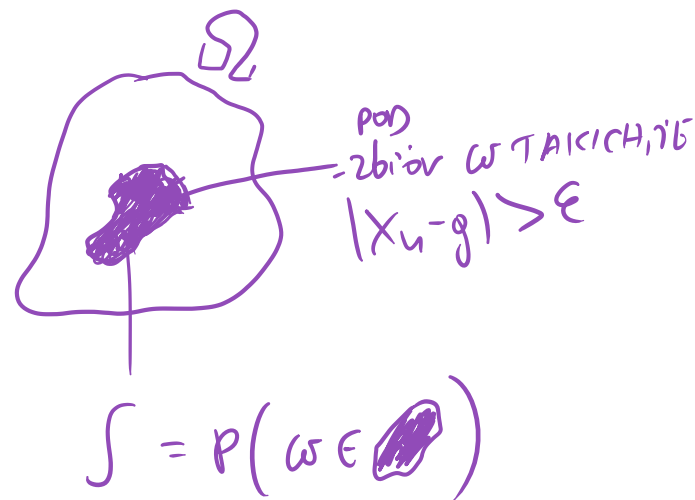


$$L_2 \stackrel{\cdot}{\Rightarrow} P$$

$$E(X_n - g)^2 = \int_{\omega \in \Omega} (X_n(\omega) - g)^2 d\omega \geq \int_{\omega: |X_n - g| > \varepsilon} (X_n - g)^2 d\omega \geq \varepsilon^2 \int_{\omega: |X_n(\omega) - g| > \varepsilon} 1 d\omega = \varepsilon^2 P(|X_n - g| > \varepsilon)$$

$X_n(\underline{\omega})$



$$P(|X_n - g| > \varepsilon) \leq \underbrace{\frac{1}{\varepsilon^2}}_{\text{stała}} \underbrace{E(X_n - g)^2}_{\text{NIEZMIENNICZA}} \quad \text{NIERÓWNOŚĆ CZEBYSZEWA}$$

\downarrow 0 \leftarrow 0