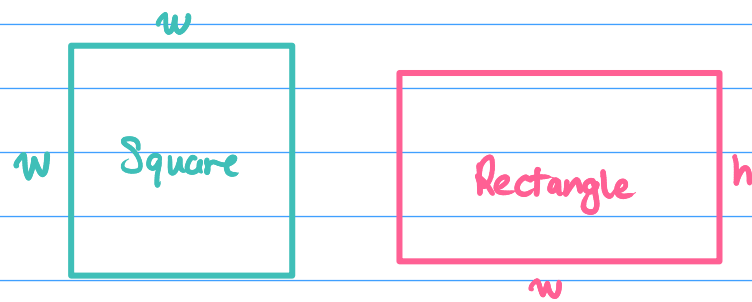


## Subtype Polymorphism



What's the subtype/supertype relation?

$$\text{Square} \leq \text{Rectangle}$$

How about the function types associated with them?

$$\begin{array}{ccc} \text{Square} \rightarrow \text{Square} & \leq & \text{Square} \rightarrow \text{Rectangle} \\ \vee/ & & \vee/ \end{array}$$

$$\text{Rectangle} \rightarrow \text{Square} \leq \text{Rectangle} \rightarrow \text{Rectangle}$$

$$\frac{\rho_1 \leq \tau_1 \quad \tau_2 \leq \rho_2}{(\tau_1 \rightarrow \tau_2) \leq (\rho_1 \rightarrow \rho_2)}$$