

\forall

$$W \xleftarrow{\phi} V$$

 \exists

$$\begin{array}{ccc} W & \xleftarrow{\phi} & V \\ & \swarrow 0 \quad \searrow \iota & \\ & \ker \phi & \end{array}$$

 \forall

$$\begin{array}{ccc} W & \xleftarrow{\phi} & V \\ & \swarrow 0 \quad \searrow \iota & \\ & \ker \phi & \\ & \uparrow J & \\ & \swarrow 0 \quad \searrow \kappa & \end{array}$$

 $\exists!$

$$\begin{array}{ccc} W & \xleftarrow{\phi} & V \\ & \swarrow 0 \quad \searrow \iota & \\ & \ker \phi & \\ & \uparrow J & \\ & \swarrow 0 \quad \searrow \kappa & \end{array}$$