

# t33\_cohsp\_1

## (TMM6s6hHPbzFSs7ciUm2YGqkkiKQcs1YCpS)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v8\_cohsp\_1 : \iota \Rightarrow o$  be given. Let  $v1\_classes1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_cohsp\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_cohsp\_1 : \iota \Rightarrow o$  be given. Let  $v6\_cohsp\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ & (k4\_tarski X1 X2 \in k7\_cohsp\_1 X0) \Leftrightarrow ((X1 \in k9\_xtuple\_0 X0) \wedge ((X2 \in k1\_funct\_1 \\ & X0 X1) \wedge (\forall X3. ((X3 \in k9\_xtuple\_0 X0) \wedge (r1\_tarski X3 X1) \wedge \\ & X2 \in k1\_funct\_1 X0 X3)))) \Rightarrow (X1 = X3)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow ((v1\_classes1 \\ & (k9\_xtuple\_0 X0)) \Rightarrow ((v8\_cohsp\_1 X0) \Leftrightarrow ((v3\_cohsp\_1 (k9\_xtuple\_0 \\ & X0)) \wedge ((v6\_cohsp\_1 X0) \wedge (\forall X1. \forall X2. \neg (X1 \in k9\_xtuple\_0 \\ & X0) \wedge ((X2 \in k1\_funct\_1 X0 X1) \wedge (\forall X3. \neg (v1\_finset\_1 X3) \wedge (( \\ & r1\_tarski X3 X1) \wedge (X2 \in k1\_funct\_1 X0 X3)))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_classes1 X0) \Leftrightarrow (\forall X1. \forall X2. ((X1 \in X0) \wedge \\ & (r1\_tarski X2 X1)) \Rightarrow (X2 \in X0)) \end{aligned} \quad (3)$$

### Theorem 1

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v8\_cohsp\_1 X0))) \Rightarrow \\ & ((v1\_classes1 (k9\_xtuple\_0 X0)) \Rightarrow (\forall X1. \forall X2. (k4\_tarski \\ & X1 X2 \in k7\_cohsp\_1 X0) \Rightarrow (v1\_finset\_1 X1))) \end{aligned}$$