

# t11\_autalg\_1 (TMRenDWr- Lqm6cdFKcHhY6tD5Zx1phhdmoMY)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k16\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k7\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1.(k10\_xtuple\_0 X0 = k1\_tarski X1) \Rightarrow (X0 = k2\_funcop\_1 (k9\_xtuple\_0 X0) X1)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow ((k9\_xtuple\_0 X1 = k1\_tarski X0) \Rightarrow (k10\_xtuple\_0 X1 = k1\_tarski (k1\_funct\_1 X1 X0))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.k7\_funcop\_1 X0 X1 = k2\_funcop\_1 X0 X1 \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1) \wedge (v4\_relat\_1 X1 X0)) \Rightarrow (k1\_relset\_1 X0 X1 = k9\_xtuple\_0 X1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.k16\_funcop\_1 X0 X1 = k7\_funcop\_1 (k1\_tarski X0) X1 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1) \wedge (v4\_relat\_1 X1 X0)) \Rightarrow (v1\_partfun1 X1 X0 \Leftrightarrow (k1\_relset\_1 X0 X1 = X0)) \quad (6)$$

## Theorem 1

$$\forall X0.\forall X1.((v1\_relat\_1 X1) \wedge ((v4\_relat\_1 X1 (k1\_tarski X0)) \wedge ((v1\_funct\_1 X1) \wedge (v1\_partfun1 X1 (k1\_tarski X0)))))) \Rightarrow (X1 = k16\_funcop\_1 X0 (k1\_funct\_1 X1 X0))$$