

## t9\_zf\_refle

(TMZEN38s473LRbF7257CnWTMRSqM4AuHvL3)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v5\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_ordinal2 : \iota \Rightarrow o$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_classes1 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v5\_ordinal1 X0) \wedge (v1\_funct\_1 X0))) \Rightarrow \\ & (\forall X1.(v3\_ordinal1 X1) \Rightarrow ((v1\_relat\_1 (k5\_relat\_1 X0 (k4\_classes1 \\ & X1))) \wedge ((v5\_ordinal1 (k5\_relat\_1 X0 (k4\_classes1 X1))) \wedge (v1\_funct\_1 \\ & (k5\_relat\_1 X0 (k4\_classes1 X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow (r1\_tarski (k10\_xtuple\_0 (k5\_relat\_1 X1 X0)) (k10\_xtuple\_0 X1)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X2)) \Rightarrow (r1\_tarski X0 X2) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow ((v1\_relat\_1 (k5\_relat\_1 X0 X1)) \wedge (v1\_funct\_1 (k5\_relat\_1 X0 X1))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X0) \Rightarrow (v1\_relat\_1 (k5\_relat\_1 X0 X1)) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow ((v1\_ordinal2 \\ & X0) \Leftrightarrow (\exists X1. (v3\_ordinal1 X1) \wedge (r1\_tarski (k10\_xtuple\_0 X0) \\ & X1))) \end{aligned} \quad (6)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v5\_ordinal1 X0) \wedge ((v1\_funct\_1 \\ & X0) \wedge (v1\_ordinal2 X0)))) \Rightarrow (\forall X1.(v3\_ordinal1 X1) \Rightarrow ((v1\_relat\_1 \\ & (k5\_relat\_1 X0 (k4\_classes1 X1))) \wedge ((v5\_ordinal1 (k5\_relat\_1 \\ & X0 (k4\_classes1 X1))) \wedge ((v1\_funct\_1 (k5\_relat\_1 X0 (k4\_classes1 \\ & X1))) \wedge (v1\_ordinal2 (k5\_relat\_1 X0 (k4\_classes1 X1)))))) \end{aligned}$$