

t3_tietze (TMJZVbUTh- taTj5Eg3xCHXZwmAG6eM4sL3pA)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k45_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 X1) \Rightarrow (r1_tarski (k5_relat_1 X1 X0) X1) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v1_valued_0 X1))) \Rightarrow (\forall X2. ((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v1_valued_0 X2)))) \Rightarrow ((k5_relat_1 (k45_valued_1 X1 X2) X0 = k45_valued_1 (k5_relat_1 X1 X0) (k5_relat_1 X2 X0)) \wedge ((k5_relat_1 (k45_valued_1 X1 X2) X0 = k45_valued_1 (k5_relat_1 X1 X0) X2) \wedge (k5_relat_1 (k45_valued_1 X1 X2) X0 = k45_valued_1 X1 (k5_relat_1 X2 X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((r1_tarski X0 X1) \Rightarrow (X0 = k5_relat_1 X1 (k9_xtuple_0 X0)))) \quad (3)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. (r1_tarski X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge (v1_funct_1 X1))) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_valued_0 X0))) \wedge ((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v3_valued_0 X1)))) \Rightarrow ((v1_relat_1 (k45_valued_1 X0 X1)) \wedge ((v1_funct_1 (k45_valued_1 X0 X1)) \wedge (v3_valued_0 (k45_valued_1 X0 X1)))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v3_valued_0 X0)) \Rightarrow ((v1_relat_1 X0) \wedge (v1_valued_0 X0)) \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_valued_0 X0))) \Rightarrow \\ & \quad (\forall X1.((v1_relat_1 X1) \wedge ((v1_funct_1 X1) \wedge (v3_valued_0 X1)))) \Rightarrow \\ & \quad (\forall X2.((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v3_valued_0 X2)))) \Rightarrow \\ & \quad ((r1_tarski X0 X1) \Rightarrow (r1_tarski (k45_valued_1 X0 X2) (k45_valued_1 X1 X2)))) \end{aligned}$$