

t5_hilbert3

(TMavwffisDFadwnQv6NFRa6q21iqtbk7oKvp)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (X2 \in k1_funct_2 X0 X1) \Leftrightarrow ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \wedge ((k9_xtuple_0 X2 = X0) \wedge (r1_tarski (k10_xtuple_0 X2) X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (2)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. (X1 = k10_xtuple_0 X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (\exists X3. (X3 \in k9_xtuple_0 X0) \wedge (X2 = k1_funct_1 X0 X3)))) \quad (3)$$

Theorem 1

$$\forall X0. \forall X1. \forall X2. \forall X3. ((v1_relat_1 X3) \wedge (v1_funct_1 X3)) \Rightarrow (((X2 \in X0) \wedge (X3 \in k1_funct_2 X0 X1)) \Rightarrow (k1_funct_1 X3 X2 \in X1))$$