

t16_tietze

(TMb3cpQVzii3BaKzYWr7VGAPjtkGrwCQxRG)

October 27, 2020

Let $v1_xreal_0 : \iota \Rightarrow o$ be given. 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 $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tietze : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k18_complex1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 X1) \Rightarrow (k9_xtuple_0 (k5_relat_1 X1 X0) = k3_xboole_0 (k9_xtuple_0 X1) X0) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((X0 \in k9_xtuple_0 (k5_relat_1 X2 X1)) \Rightarrow (k1_funct_1 (k5_relat_1 X2 X1) X0 = k1_funct_1 X2 X0)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_valued_0 X0))) \Rightarrow (k1_seq_1 X0 X1 = k1_funct_1 X0 X1) \quad (3)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v3_valued_0 X0))) \Rightarrow (\forall X1. (v1_xreal_0 X1) \Rightarrow (\forall X2. (r1_tietze X0 X1 X2) \Leftrightarrow (\forall X3. (X3 \in k3_xboole_0 X2 (k9_xtuple_0 X0)) \Rightarrow (r1_xxreal_0 (k18_complex1 (k1_seq_1 X0 X3)) X1)))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. k3_xboole_0 X0 X1 = k3_xboole_0 X1 X0 \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.\forall X2.((v1_relat_1 \\ & X2) \wedge ((v1_funct_1 X2) \wedge (v3_valued_0 X2))) \Rightarrow (\forall X3.((v1_relat_1 \\ & X3) \wedge ((v1_funct_1 X3) \wedge (v3_valued_0 X3))) \Rightarrow (((k5_relat_1 X2 X1 = \\ & k5_relat_1 X3 X1) \wedge (r1_tietze X2 X0 X1)) \Rightarrow (((\neg r1_tarski X1 (k9_xtuple_0 \\ & X2)) \wedge (\neg r1_tarski (k9_xtuple_0 X3) (k9_xtuple_0 X2))) \vee (r1_tietze \\ & X3 X0 X1)))))) \end{aligned}$$