

t73_funct_4

(TMbvasE216nm1NS4J7P7QfmJr78k2ies5mP)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1.((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2.k5_relat_1 (k1_funct_4 X0 X1) X2 = k1_funct_4 (k5_relat_1 X0 X2) (k5_relat_1 X1 X2))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X1) \Rightarrow ((k5_relat_1 X1 X0 = k1_xboole_0) \Leftrightarrow (r1_xboole_0 (k9_xtuple_0 X1) X0)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X1) \Rightarrow (r1_tarski (k5_relat_1 X1 X0) X1) \quad (3)$$

Assume the following.

$$\forall X0.k3_xboole_0 X0 k1_xboole_0 = k1_xboole_0 \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarski X0 X1) \Rightarrow (k3_xboole_0 X0 X1 = X0) \quad (5)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (k1_funct_4 k1_xboole_0 X0 = X0) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v1_relat_1 (k5_relat_1 X0 X1)) \wedge (v1_funct_1 (k5_relat_1 X0 X1))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(v1_relat_1 X0)\Rightarrow(v1_relat_1 (k3_xboole_0 X0 X1)) \quad (8)$$

Theorem 1

$$\forall X0.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow(\forall X1.((v1_relat_1 X1)\wedge(v1_funct_1 X1))\Rightarrow(\forall X2.(r1_xboole_0 (k9_xtuple_0 X0) X2)\Rightarrow(k5_relat_1 (k1_funct_4 X0 X1) X2 = k5_relat_1 X1 X2)))$$