

t3_combgras (TMd- cuhJGDQ97E6y92REXHwSKybU5zcxTuRY)

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Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v2_funct_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k7_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 X1) \Rightarrow ((r1_tarski X0 (k9_xtuple_0 X1)) \Rightarrow (k9_xtuple_0 (k5_relat_1 X1 X0) = X0)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((v2_funct_1 X1) \Rightarrow (v2_funct_1 (k5_relat_1 X1 X0))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (v1_relat_1 X1) \Rightarrow (k10_xtuple_0 (k5_relat_1 X1 X0) = k7_relat_1 X1 X0) \quad (3)$$

Assume the following.

$$\forall X0. (v1_relat_1 X0) \Rightarrow (k7_relat_1 X0 (k9_xtuple_0 X0) = k10_xtuple_0 X0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (r1_ordinal1 (k1_card_1 X0) (k1_card_1 X1)) \Leftrightarrow (\exists X2. ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \wedge ((v2_funct_1 X2) \wedge ((k9_xtuple_0 X2 = X0) \wedge (r1_tarski (k10_xtuple_0 X2) X1)))) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v1_relat_1 (k5_relat_1 X0 X1)) \wedge (v1_funct_1 (k5_relat_1 X0 X1))) \quad (6)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.(X0 = X1)\Leftrightarrow((r1_tarski X0 X1)\wedge(r1_tarski X1 X0)) \quad (8)$$

Theorem 1

$$\forall X0.\forall X1.(r1_ordinal1 (k1_card_1 X0) (k1_card_1 X1))\Leftrightarrow(\exists X2.((v1_relat_1 X2)\wedge(v1_funct_1 X2))\wedge((v2_funct_1 X2)\wedge((r1_tarski X0 (k9_xtuple_0 X2))\wedge(r1_tarski (k7_relat_1 X2 X0) X1))))$$