

t36_rewrite1
(TMbxiKfLiQ8GruBw4x5FkrrG8wexHp5ZFQ3)

October 27, 2020

Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r1_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r5_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r6_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.r1_rewrite1 X0 X1 X1) \quad (1)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.\forall X2.(r6_rewrite1 X0 X1 X2) \Leftrightarrow (\exists X3.(r1_rewrite1 X0 X3 X1) \wedge (r1_rewrite1 X0 X3 X2))) \quad (2)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.\forall X2.(r5_rewrite1 X0 X1 X2) \Leftrightarrow (\exists X3.(r1_rewrite1 X0 X1 X3) \wedge (r1_rewrite1 X0 X2 X3))) \quad (3)$$

Theorem 1

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.\forall X2.(r1_rewrite1 X0 X1 X2) \Rightarrow ((r5_rewrite1 X0 X1 X2) \wedge ((r6_rewrite1 X0 X1 X2) \wedge ((r5_rewrite1 X0 X2 X1) \wedge (r6_rewrite1 X0 X2 X1))))))$$