t60_rewrite1 (TMG-pxLNSoiBEYjJ5U3WnzW3aAsQgx499GBP)

October 27, 2020

Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $r13\_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v9\_rewrite1 : \iota \Rightarrow o$ be given. Let $r8\_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r5\_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1\_relat\_1\ X0) \Rightarrow (\forall X1.\forall X2.(r13\_rewrite1\ X0\ X1\ X2) \Leftrightarrow ((r8\_rewrite1\ X0\ X1\ X2) \wedge (\neg r5\_rewrite1\ X0\ X1\ X2))) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0) \Rightarrow ((v9\_rewrite1\ X0) \Leftrightarrow (\forall X1.\forall X2.\forall X3.((k4\_tarski\ X1\ X2 \in X0) \wedge (k4\_tarski\ X1\ X3 \in X0)) \Rightarrow (r5\_rewrite1\ X0\ X2\ X3))) \tag{2}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0) \Rightarrow (\forall X1.\forall X2.(r8\_rewrite1\ X0\ X1\ X2) \Leftrightarrow (\exists X3.((k4\_tarski\ X3\ X1 \in X0) \vee (X1 = X3)) \wedge ((k4\_tarski\ X3\ X2 \in X0) \vee (X2 = X3)))) \tag{3}$$

Theorem 1

$$\forall X0.(v1\_relat\_1\ X0) \Rightarrow ((\forall X1.\forall X2.\neg r13\_rewrite1\ X0\ X1\ X2) \Rightarrow (v9\_rewrite1\ X0))$$