

t25_rewrite1
(TMFkguwLSpa52hUhFx4xy9BNBS1LteiagUb)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r1_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r2_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_relat_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 (k2_xboole_0 X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. (v1_relat_1 X0) \Rightarrow (\forall X1. (v1_relat_1 X1) \Rightarrow ((r1_tarski X0 X1) \Rightarrow (\forall X2. \forall X3. (r1_rewrite1 X0 X2 X3) \Rightarrow (r1_rewrite1 X1 X2 X3)))) \quad (2)$$

Assume the following.

$$\forall X0. (v1_relat_1 X0) \Rightarrow (\forall X1. \forall X2. (r2_rewrite1 X0 X1 X2) \Rightarrow (r2_rewrite1 X0 X2 X1)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X0) \wedge (v1_relat_1 X1)) \Rightarrow (v1_relat_1 (k2_xboole_0 X0 X1)) \quad (4)$$

Assume the following.

$$\forall X0. (v1_relat_1 X0) \Rightarrow (v1_relat_1 (k2_relat_1 X0)) \quad (5)$$

Assume the following.

$$\forall X0. (v1_relat_1 X0) \Rightarrow (\forall X1. \forall X2. (r2_rewrite1 X0 X1 X2) \Leftrightarrow (r1_rewrite1 (k2_xboole_0 X0 (k2_relat_1 X0)) X1 X2)) \quad (6)$$

Theorem 1

$$\forall X0. (v1_relat_1 X0) \Rightarrow (\forall X1. \forall X2. (r1_rewrite1 X0 X1 X2) \Rightarrow ((r2_rewrite1 X0 X1 X2) \wedge (r2_rewrite1 X0 X2 X1)))$$