

t15\_rewrite1 (TM-  
Lin8qjZ5TmkxZWQ7Q7qfZxJmGa1rWKitD)

October 27, 2020

Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_rewrite1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.\forall X2.(k4\_tarski X1 X2 \in X0) \Rightarrow (m1\_rewrite1 (k10\_finseq\_1 X1 X2) X0)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1 X2) \wedge ((v1\_funct\_1 X2) \wedge (v1\_finseq\_1 X2))) \Rightarrow ((X2 = k10\_finseq\_1 X0 X1) \Leftrightarrow ((k3\_finseq\_1 X2 = np\_2) \wedge ((k1\_funct\_1 X2 np\_1 = X0) \wedge (k1\_funct\_1 X2 np\_2 = X1)))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1 (k10\_finseq\_1 X0 X1)) \wedge (v1\_funct\_1 (k10\_finseq\_1 X0 X1)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.v1\_finseq\_1 (k10\_finseq\_1 X0 X1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.k4\_tarski X0 X1 = k2\_tarski (k2\_tarski X0 X1) (k1\_tarski X0) \quad (5)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.\forall X2.(r1\_rewrite1 X0 X1 X2) \Leftrightarrow (\exists X3.(m1\_rewrite1 X3 X0) \wedge ((k1\_funct\_1 X3 np\_1 = X1) \wedge (k1\_funct\_1 X3 (k3\_finseq\_1 X3) = X2)))) \quad (6)$$

**Theorem 1**

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.\forall X2.(k4\_tarski X1 X2 \in X0) \Rightarrow (r1\_rewrite1 X0 X1 X2))$$