

## t12\_rewrite1

(TMWx98rYpyxkqxv47qTgqNB5M6h5kh5bvNq)

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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  $m1\_rewrite1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_finseq\_1 : \iota \Rightarrow \iota$  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  $np\_1 : \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_finseq\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.m1\_rewrite1 (k9\_finseq\_1 X1) X0) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1))) \Rightarrow ((X1 = k9\_finseq\_1 X0) \Leftrightarrow ((k3\_finseq\_1 X1 = np\_1) \wedge (k1\_funct\_1 X1 np\_1 = X0))) \quad (2)$$

Assume the following.

$$\forall X0.k9\_finseq\_1 X0 = k5\_finseq\_1 X0 \quad (3)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.(m1\_rewrite1 X1 X0) \Rightarrow ((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1)))) \quad (4)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.\forall X2.(r1\_rewrite1 X0 X1 X2) \Leftrightarrow (\exists X3.(m1\_rewrite1 X3 X0) \wedge ((k1\_funct\_1 X3 np\_1 = X1) \wedge (k1\_funct\_1 X3 (k3\_finseq\_1 X3) = X2)))) \quad (5)$$

**Theorem 1**  $\forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.r1\_rewrite1 X0 X1 X1).$