

t32\_rewrite1  
(TMLSVR2rhsBYaFsvSyGCce9ihZHKRgVmcUF)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $r2\_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_relat\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.\forall X2.(r2\_rewrite1 X0 X1 X2) \Rightarrow ((X1 \in k1\_relat\_1 X0) \vee (X1 = X2))) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.\forall X2.(r2\_rewrite1 X0 X1 X2) \Rightarrow (r2\_rewrite1 X0 X2 X1)) \quad (2)$$

**Theorem 1**

$$\forall X0.(v1\_relat\_1 X0) \Rightarrow (\forall X1.\forall X2.(r2\_rewrite1 X0 X1 X2) \Rightarrow ((X1 = X2) \vee ((X1 \in k1\_relat\_1 X0) \wedge (X2 \in k1\_relat\_1 X0))))$$