

t40\_rlvect\_5 (TMXYUk-  
Faya72QAJ4g3BYLy6UQ3HFGDFJvhE)

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Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v13\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v2\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v4\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v5\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v6\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v7\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v8\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v1\_rlvect\_5 : \iota \Rightarrow o$  be given. Let  $l1\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_rlvect\_5 : \iota \Rightarrow \iota$  be given. Let  $k2\_rlvect\_5 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $m1\_rlsub\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_rlvect\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v5\_rlvect\_1 X0) \wedge \\ & ((v6\_rlvect\_1 X0) \wedge ((v7\_rlvect\_1 X0) \wedge ((v8\_rlvect\_1 X0) \wedge ((v1\_rlvect\_5 \\ & X0) \wedge (l1\_rlvect\_1 X0)))))))))) \Rightarrow (\forall X1. (m1\_rlsub\_1 X1 X0) \Rightarrow \\ & (r1\_xxreal\_0 (k1\_rlvect\_5 X1) (k1\_rlvect\_5 X0))) \end{aligned} \quad (1)$$

Assume the following.

$$v1\_xboole\_0 \quad k1\_xboole\_0 \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v5\_rlvect\_1 X0) \wedge \\ & ((v6\_rlvect\_1 X0) \wedge ((v7\_rlvect\_1 X0) \wedge ((v8\_rlvect\_1 X0) \wedge ((v1\_rlvect\_5 \\ & X0) \wedge (l1\_rlvect\_1 X0)))))))))) \Rightarrow (\forall X1. (m2\_subset\_1 X1 \\ & k1\_numbers \quad k5\_numbers) \Rightarrow (\forall X2. (X2 = k2\_rlvect\_5 X0 X1) \Leftrightarrow ( \\ & \forall X3. (X3 \in X2) \Leftrightarrow (\exists X4. ((v1\_rlvect\_1 X4) \wedge (m1\_rlsub\_1 \\ & X4 X0)) \wedge ((X4 = X3) \wedge (k1\_rlvect\_5 X4 = X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. (v1\_xboole\_0 X0) \Leftrightarrow (\forall X1. \neg X1 \in X0) \quad (4)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\ & ((\neg v2\_struct\_0 X1) \wedge (v13\_algstr\_0 X1) \wedge (v2\_rlvect\_1 X1) \wedge ( \\ & v3\_rlvect\_1 X1) \wedge (v4\_rlvect\_1 X1) \wedge (v5\_rlvect\_1 X1) \wedge (v6\_rlvect\_1 \\ & X1) \wedge (v7\_rlvect\_1 X1) \wedge (v8\_rlvect\_1 X1) \wedge (v1\_rlvect\_5 X1) \wedge \\ & (l1\_rlvect\_1 X1)))))) \Rightarrow ((\neg r1\_xxreal\_0 X0 (k1\_rlvect\_5 X1)) \Rightarrow \\ & (k2\_rlvect\_5 X1 X0 = k1\_xboole\_0)) \end{aligned}$$