

## t24\_rlvect\_2

(TMWV3p7yEPTCCi9SkfmPB28MKutpSAC4s34)

October 27, 2020

Let  $m1\_subset.1 : \iota \Rightarrow \iota \Rightarrow o$  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  $l1\_rlvect.1 : \iota \Rightarrow o$  be given. Let  $u1\_struct.0 : \iota \Rightarrow \iota$  be given. Let  $m2\_finseq.1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_funct.1 : \iota \Rightarrow o$  be given. Let  $v1\_funct.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k1\_zfmisc.1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_relset.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_rlvect.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_rlvect.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_funct.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat.1 : \iota \Rightarrow o$  be given. Let  $v1\_finseq.1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_finseq.1 : \iota \Rightarrow \iota$  be given. Let  $m1\_finseq.1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_relat.1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_xtuple.0 : \iota \Rightarrow \iota$  be given. Let  $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v5\_relat.1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat.1 X0) \wedge ((v1\_funct.1 X0) \wedge (v1\_finseq.1 X0))) \Rightarrow \\ & (\forall X1.((v1\_relat.1 X1) \wedge ((v1\_funct.1 X1) \wedge (v1\_finseq.1 \\ & X1))) \Rightarrow ((k3\_finseq.1 X0 = k3\_finseq.1 X1) \Leftrightarrow (k1\_relset.1 k5\_numbers \\ & X0 = k1\_relset.1 k5\_numbers X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (m2\_finseq.1 X1 X0) \Leftrightarrow (m1\_finseq.1 X1 X0) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat.1 X1) \wedge (v4\_relat.1 X1 X0)) \Rightarrow (k1\_relset.1 X0 X1 = k9\_xtuple.0 X1) \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. (m2\_finseq.1 X1 X0) \Rightarrow ((v1\_funct.1 X1) \wedge ((v1\_finseq.1 X1) \wedge (m1\_subset.1 X1 (k1\_zfmisc.1 (k2\_zfmisc.1 k5\_numbers X0)))))) \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 \\
& X0) \wedge ((v2\_rlvect\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge \\
& ((v5\_rlvect\_1 X0) \wedge ((v6\_rlvect\_1 X0) \wedge ((v7\_rlvect\_1 X0) \wedge ((v8\_rlvect\_1 \\
& X0) \wedge (l1\_rlvect\_1 X0)))))))))) \wedge ((m1\_finseq\_1 X1 (u1\_struct\_0 \\
& X0)) \wedge ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 X0) k1\_numbers) \wedge \\
& (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) k1\_numbers)))))) \Rightarrow \\
& (m2\_finseq\_1 (k5\_rlvect\_2 X0 X1 X2) (u1\_struct\_0 X0))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\
& X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v5\_rlvect\_1 X0) \wedge \\
& ((v6\_rlvect\_1 X0) \wedge ((v7\_rlvect\_1 X0) \wedge ((v8\_rlvect\_1 X0) \wedge (l1\_rlvect\_1 \\
& X0)))))))))) \Rightarrow (\forall X1. (m2\_finseq\_1 X1 (u1\_struct\_0 X0)) \Rightarrow \\
& (\forall X2. ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 X0) \\
& k1\_numbers) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 \\
& X0) k1\_numbers)))))) \Rightarrow (\forall X3. (m2\_finseq\_1 X3 (u1\_struct\_0 \\
& X0)) \Rightarrow ((X3 = k5\_rlvect\_2 X0 X1 X2) \Leftrightarrow ((k3\_finseq\_1 X3 = k3\_finseq\_1 \\
& X1) \wedge (\forall X4. (m1\_subset\_1 X4 k5\_numbers) \Rightarrow ((X4 \in k1\_relset\_1 \\
& k5\_numbers X3) \Rightarrow (k1\_funct\_1 X3 X4 = k1\_rlvect\_1 X0 (k7\_partfun1 \\
& (u1\_struct\_0 X0) X1 X4) (k3\_funct\_2 (u1\_struct\_0 X0) k1\_numbers \\
& X2 (k7\_partfun1 (u1\_struct\_0 X0) X1 X4))))))))))
\end{aligned} \tag{6}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge ((v5\_relat\_1 X1 X0) \wedge ( \\
& v1\_funct\_1 X1))) \Rightarrow (\forall X2. (X2 \in k9\_xtuple\_0 X1) \Rightarrow (k7\_partfun1 \\
& X0 X1 X2 = k1\_funct\_1 X1 X2))
\end{aligned} \tag{7}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\
& (k2\_zfmisc\_1 X0 X1))) \Rightarrow ((v4\_relat\_1 X2 X0) \wedge (v5\_relat\_1 X2 X1))
\end{aligned} \tag{8}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\
& (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2)
\end{aligned} \tag{9}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1. (\neg v2\_struct\_0 \\ & X1) \wedge ((v13\_algstr\_0 X1) \wedge ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 X1) \wedge \\ & ((v4\_rlvect\_1 X1) \wedge ((v5\_rlvect\_1 X1) \wedge ((v6\_rlvect\_1 X1) \wedge ((v7\_rlvect\_1 \\ & X1) \wedge ((v8\_rlvect\_1 X1) \wedge (l1\_rlvect\_1 X1)))))))))) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (u1\_struct\_0 X1)) \Rightarrow (\forall X3.(m2\_finseq\_1 X3 \\ & (u1\_struct\_0 X1)) \Rightarrow (\forall X4. ((v1\_funct\_1 X4) \wedge ((v1\_funct\_2 \\ & X4 (u1\_struct\_0 X1) k1\_numbers) \wedge (m1\_subset\_1 X4 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (u1\_struct\_0 X1) k1\_numbers)))))) \Rightarrow (((X0 \in k1\_relset\_1 \\ & k5\_numbers X3) \wedge (X2 = k1\_funct\_1 X3 X0)) \Rightarrow (k1\_funct\_1 (k5\_rlvect\_2 \\ & X1 X3 X4) X0 = k1\_rlvect\_1 X1 X2 (k3\_funct\_2 (u1\_struct\_0 X1) k1\_numbers \\ & X4 X2)))))) \end{aligned}$$