

t25\_ndiff\_5 (TMW-  
BuLFC32KrUsWpUS1qm7b9TEk9ovNYX7Q)

October 27, 2020

Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  be given. Let  $v2\_prvect\_2 : \iota \Rightarrow o$  be given. Let  $v1\_ndiff\_5 : \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v7\_struct\_0 : \iota \Rightarrow o$  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  $v3\_normsp\_0 : \iota \Rightarrow o$  be given. Let  $v4\_normsp\_0 : \iota \Rightarrow o$  be given. Let  $v2\_normsp\_1 : \iota \Rightarrow o$  be given. Let  $l1\_normsp\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k14\_prvect\_2 : \iota \Rightarrow \iota$  be given. Let  $k4\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $r2\_ndiff\_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_ndiff\_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X2)) \Rightarrow (r1\_tarski X0 X2) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v4\_relat\_1 X1 X0)) \Rightarrow (m1\_subset\_1 (k1\_relset\_1 X0 X1) (k1\_zfmisc\_1 X0)) \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1\_xboole\_0 X0) \wedge ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 \\
& X0) \wedge ((v1\_finseq\_1 X0) \wedge ((v2\_prvect\_2 X0) \wedge (v1\_ndiff\_5 X0)))))) \Rightarrow \\
& (\forall X1.((\neg v2\_struct\_0 X1) \wedge ((\neg v7\_struct\_0 X1) \wedge ((v13\_algstr\_0 \\
& X1) \wedge ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 X1) \wedge ((v4\_rlvect\_1 X1) \wedge \\
& ((v5\_rlvect\_1 X1) \wedge ((v6\_rlvect\_1 X1) \wedge ((v7\_rlvect\_1 X1) \wedge ((v8\_rlvect\_1 \\
& X1) \wedge ((v3\_normsp\_0 X1) \wedge ((v4\_normsp\_0 X1) \wedge ((v2\_normsp\_1 X1) \wedge \\
& (l1\_normsp\_1 X1)))))))))) \Rightarrow (\forall X2. \forall X3. ((v1\_funct\_1 \\
& X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 ( \\
& k14\_prvect\_2 X0)) (u1\_struct\_0 X1)))))) \Rightarrow (\forall X4. (r2\_ndiff\_5 \\
& X0 X1 X2 X3 X4) \Leftrightarrow ((r1\_tarski X4 (k1\_relset\_1 (u1\_struct\_0 (k14\_prvect\_2 \\
& X0)) X3)) \wedge (\forall X5. (m1\_subset\_1 X5 (u1\_struct\_0 (k14\_prvect\_2 \\
& X0)))) \Rightarrow ((X5 \in X4) \Rightarrow (r1\_ndiff\_5 X0 X1 X2 (k2\_partfun1 (u1\_struct\_0 \\
& (k14\_prvect\_2 X0)) (u1\_struct\_0 X1) X3 X4 X5))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow ((v4\_relat\_1 X2 X0) \wedge (v5\_relat\_1 X2 X1)) \tag{5}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2) \tag{6}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((\neg v1\_xboole\_0 X0) \wedge ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 \\
& X0) \wedge ((v1\_finseq\_1 X0) \wedge ((v2\_prvect\_2 X0) \wedge (v1\_ndiff\_5 X0)))))) \Rightarrow \\
& (\forall X1.((\neg v2\_struct\_0 X1) \wedge ((\neg v7\_struct\_0 X1) \wedge ((v13\_algstr\_0 \\
& X1) \wedge ((v2\_rlvect\_1 X1) \wedge ((v3\_rlvect\_1 X1) \wedge ((v4\_rlvect\_1 X1) \wedge \\
& ((v5\_rlvect\_1 X1) \wedge ((v6\_rlvect\_1 X1) \wedge ((v7\_rlvect\_1 X1) \wedge ((v8\_rlvect\_1 \\
& X1) \wedge ((v3\_normsp\_0 X1) \wedge ((v4\_normsp\_0 X1) \wedge ((v2\_normsp\_1 X1) \wedge \\
& (l1\_normsp\_1 X1)))))))))) \Rightarrow (\forall X2. ((v1\_funct\_1 X2) \wedge \\
& (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 (k14\_prvect\_2 \\
& X0)) (u1\_struct\_0 X1)))))) \Rightarrow (\forall X3. \forall X4. ((X4 \in k4\_finseq\_1 \\
& X0) \wedge (r2\_ndiff\_5 X0 X1 X4 X2 X3)) \Rightarrow (m1\_subset\_1 X3 (k1\_zfmisc\_1 ( \\
& u1\_struct\_0 (k14\_prvect\_2 X0))))))
\end{aligned}$$