

l22\_o\_ring\_1  
(TMGpzUQ4erExvKaYZ5ejd7GrkLdqkbT7Bzz)

October 27, 2020

Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l6\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v2\_o\_ring\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v6\_o\_ring\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_o\_ring\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v5\_o\_ring\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ((v1\_o\_ring\_1 X1 X0) \Rightarrow (v5\_o\_ring\_1 \\ & \quad X1 X0))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m2\_finseq\_1 X1 X0) \Rightarrow ((v1\_funct\_1 X1) \wedge ( \\ & (v1\_finseq\_1 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers \\ & \quad X0)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1\_relat\_1 X1) \wedge ((v5\_relat\_1 \\ & X1 X0) \wedge (v1\_funct\_1 X1))) \Rightarrow (m1\_subset\_1 (k7\_partfun1 X0 X1 X2) X0) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \Rightarrow (\forall X1. \\ & (m2\_finseq\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ((v6\_oring\_1 X1 X0) \Leftrightarrow ((k3\_finseq\_1 \\ & X1 \neq k6\_numbers) \wedge ((v5\_oring\_1 (k7\_partfun1 (u1\_struct\_0 X0) \\ & X1 np\_1) X0) \wedge (\forall X2.(v7\_ordinal1 X2) \Rightarrow (\neg(X2 \neq k6\_numbers) \wedge \\ & ((\neg r1\_xreal\_0 (k3\_finseq\_1 X1) X2) \wedge (\forall X3.(m1\_subset\_1 \\ & X3 (u1\_struct\_0 X0)) \Rightarrow (\neg(v5\_oring\_1 X3 X0) \wedge (k7\_partfun1 (u1\_struct\_0 \\ & X0) X1 (k1\_nat\_1 X2 np\_1) = k1\_algstr\_0 X0 (k7\_partfun1 (u1\_struct\_0 \\ & X0) X1 X2) X3)))))))))) \\ & \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \Rightarrow (\forall X1. \\ & (m2\_finseq\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ((v2\_oring\_1 X1 X0) \Leftrightarrow ((k3\_finseq\_1 \\ & X1 \neq k6\_numbers) \wedge ((v1\_oring\_1 (k7\_partfun1 (u1\_struct\_0 X0) \\ & X1 np\_1) X0) \wedge (\forall X2.(v7\_ordinal1 X2) \Rightarrow (\neg(X2 \neq k6\_numbers) \wedge \\ & ((\neg r1\_xreal\_0 (k3\_finseq\_1 X1) X2) \wedge (\forall X3.(m1\_subset\_1 \\ & X3 (u1\_struct\_0 X0)) \Rightarrow (\neg(v1\_oring\_1 X3 X0) \wedge (k7\_partfun1 (u1\_struct\_0 \\ & X0) X1 (k1\_nat\_1 X2 np\_1) = k1\_algstr\_0 X0 (k7\_partfun1 (u1\_struct\_0 \\ & X0) X1 X2) X3)))))))))) \\ & \end{aligned} \tag{5}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow ((v4\_relat\_1 X2 X0) \wedge (v5\_relat\_1 X2 X1)) \tag{6}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2) \tag{7}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \Rightarrow (\forall X1. \\ & (m2\_finseq\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ((v2\_oring\_1 X1 X0) \Rightarrow (v6\_oring\_1 \\ & X1 X0))) \end{aligned}$$