

# l23\_o\_ring\_1

## (TMT4sfeoussL8ij79QSdysUTGzjHmRr9qix)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l6\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v3\_o\_ring\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v7\_o\_ring\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  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  $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \Rightarrow (\forall X1. \\ & (m2\_finseq\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ((v2\_o\_ring\_1 X1 X0) \Rightarrow (v6\_o\_ring\_1 \\ & X1 X0))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ((v7\_o\_ring\_1 X1 X0) \Leftrightarrow (\exists X2. \\ & (m2\_finseq\_1 X2 (u1\_struct\_0 X0)) \wedge ((v6\_o\_ring\_1 X2 X0) \wedge (X1 = k7\_partfun1 \\ & (u1\_struct\_0 X0) X2 (k3\_finseq\_1 X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ((v3\_o\_ring\_1 X1 X0) \Leftrightarrow (\exists X2. \\ & (m2\_finseq\_1 X2 (u1\_struct\_0 X0)) \wedge ((v2\_o\_ring\_1 X2 X0) \wedge (X1 = k7\_partfun1 \\ & (u1\_struct\_0 X0) X2 (k3\_finseq\_1 X2)))))) \end{aligned} \tag{3}$$

### Theorem 1

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l6\_algstr\_0 X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ((v3\_o\_ring\_1 X1 X0) \Rightarrow (v7\_o\_ring\_1 \\ & X1 X0))) \end{aligned}$$