

t79\_abcmiz\_0 (TM-  
SEf3xXM3NwaoZhsGnrVtn3bPYUVYtb6cD)

October 27, 2020

Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v3\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v4\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v5\_orders\_2 : \iota \Rightarrow o$  be given. Let  $v1\_lattice3 : \iota \Rightarrow o$  be given. Let  $v1\_abcmiz\_0 : \iota \Rightarrow o$  be given. Let  $v4\_abcmiz\_0 : \iota \Rightarrow o$  be given. Let  $v9\_abcmiz\_0 : \iota \Rightarrow o$  be given. Let  $v14\_abcmiz\_0 : \iota \Rightarrow o$  be given. Let  $l3\_abcmiz\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r3\_orders\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k12\_abcmiz\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_rewrite1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k11\_abcmiz\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\ & X0) \wedge ((v5\_orders\_2 X0) \wedge ((v1\_lattice3 X0) \wedge ((v1\_abcmiz\_0 X0) \wedge \\ & ((\neg v4\_abcmiz\_0 X0) \wedge ((v9\_abcmiz\_0 X0) \wedge ((v14\_abcmiz\_0 X0) \wedge (l3\_abcmiz\_0 \\ & X0)))))))))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow \\ & (r1\_rewrite1 (k11\_abcmiz\_0 X0) X1 (k12\_abcmiz\_0 X0 X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 \\ & X0) \wedge ((v1\_lattice3 X0) \wedge ((v1\_abcmiz\_0 X0) \wedge ((\neg v4\_abcmiz\_0 X0) \wedge \\ & ((v9\_abcmiz\_0 X0) \wedge (l3\_abcmiz\_0 X0)))))))))) \Rightarrow (\forall X1. (m1\_subset\_1 \\ & X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (u1\_struct\_0 \\ & X0)) \Rightarrow ((r1\_rewrite1 (k11\_abcmiz\_0 X0) X1 X2) \Rightarrow (r3\_orders\_2 X0 X1 \\ & X2)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge \\ & ((v4\_orders\_2 X0) \wedge ((v5\_orders\_2 X0) \wedge ((v1\_lattice3 X0) \wedge ((v1\_abcmiz\_0 \\ & X0) \wedge ((\neg v4\_abcmiz\_0 X0) \wedge ((v9\_abcmiz\_0 X0) \wedge ((v14\_abcmiz\_0 X0) \wedge \\ & (l3\_abcmiz\_0 X0)))))))))) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow \\ & (m1\_subset\_1 (k12\_abcmiz\_0 X0 X1) (u1\_struct\_0 X0)) \end{aligned} \tag{3}$$

**Theorem 1**

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v3\_orders\_2 X0) \wedge ((v4\_orders\_2 \\ & X0) \wedge ((v5\_orders\_2 X0) \wedge ((v1\_lattice3 X0) \wedge ((v1\_abcmiz\_0 X0) \wedge \\ & ((\neg v4\_abcmiz\_0 X0) \wedge ((v9\_abcmiz\_0 X0) \wedge ((v14\_abcmiz\_0 X0) \wedge (l3\_abcmiz\_0 \\ & X0)))))))))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow \\ & (r3\_orders\_2 X0 X1 (k12\_abcmiz\_0 X0 X1))) \end{aligned}$$