

## t2\_endalg

(TMZ97hCBvQQSBWwu2nYdAsH14XhCg7XLqdp)

October 27, 2020

Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_unialg\_1 : \iota \Rightarrow o$  be given. Let  $v3\_unialg\_1 : \iota \Rightarrow o$  be given. Let  $v4\_unialg\_1 : \iota \Rightarrow o$  be given. Let  $l1\_unialg\_1 : \iota \Rightarrow o$  be given. Let  $k6\_partfun1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_endalg : \iota \Rightarrow \iota$  be given. Let  $r1\_alg\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_relat\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  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  $m1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \Rightarrow (r1\_alg\_1 X0 X0 (k6\_partfun1 (u1\_struct\_0 X0))) \quad (1)$$

Assume the following.

$$\forall X0. k6\_partfun1 X0 = k4\_relat\_1 X0 \quad (2)$$

Assume the following.

$$\forall X0. (v1\_relat\_1 (k4\_relat\_1 X0)) \wedge ((v4\_relat\_1 (k4\_relat\_1 X0) X0) \wedge ((v1\_funct\_1 (k4\_relat\_1 X0)) \wedge (v1\_partfun1 (k4\_relat\_1 X0) X0))) \quad (3)$$

Assume the following.

$$\forall X0. (v1\_partfun1 (k6\_partfun1 X0) X0) \wedge (m1\_subset\_1 (k6\_partfun1 X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0))) \quad (4)$$

Assume the following.

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \Rightarrow (m1\_funct\_2 (k1\_endalg X0) (u1\_struct\_0 X0) (u1\_struct\_0 X0)) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 \\ & X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \Rightarrow (\forall X1.(m1\_funct\_2 \\ & X1 (u1\_struct\_0 X0) (u1\_struct\_0 X0)) \Rightarrow ((X1 = k1\_endalg X0) \Leftrightarrow (\forall X2. \\ & ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 X0) (u1\_struct\_0 \\ & X0)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 \\ & X0) (u1\_struct\_0 X0)))))) \Rightarrow ((X2 \in X1) \Leftrightarrow (r1\_alg\_1 X0 X0 X2)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1))) \Rightarrow ((v1\_partfun1 X2 X0) \Rightarrow (v1\_funct\_2 X2 X0 X1)) \end{aligned} \quad (7)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 \\ & X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \Rightarrow (k6\_partfun1 (u1\_struct\_0 \\ & X0) \in k1\_endalg X0) \end{aligned}$$