

## t26\_bcialg\_6

(TMcofjAU2poCxJYeeXhEpQ4Y8FTjQrqRgUw)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v3\_bcialg\_1 : \iota \Rightarrow o$  be given. Let  $v4\_bcialg\_1 : \iota \Rightarrow o$  be given. Let  $v5\_bcialg\_1 : \iota \Rightarrow o$  be given. Let  $v7\_bcialg\_1 : \iota \Rightarrow o$  be given. Let  $l2\_bcialg\_1 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k5\_bcialg\_1 : \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_bcialg\_6 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_bcialg\_6 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_bcialg\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Let  $l1\_bcialg\_1 : \iota \Rightarrow o$  be given. Let  $l2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k4\_bcialg\_1 : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v10\_bcialg\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_bcialg\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_bcialg\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. \neg(X0 \in X1) \wedge ((m1\_subset\_1 X1 (k1\_zfmisc\_1 X2)) \wedge (v1\_xboole\_0 X2)) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (&(\neg v2\_struct\_0 X0) \wedge ((v3\_bcialg\_1 X0) \wedge ((v4\_bcialg\_1 \\ X0) \wedge ((v5\_bcialg\_1 X0) \wedge ((v7\_bcialg\_1 X0) \wedge (l2\_bcialg\_1 X0)))))) \Rightarrow & (2) \\ (\forall X1. (m2\_subset\_1 X1 (u1\_struct\_0 X0) (k5\_bcialg\_1 X0)) \Rightarrow & \\ (\forall X2. (v1\_int\_1 X2) \Rightarrow (k3\_bcialg\_6 X0 X2 X1 \in k5\_bcialg\_1 X0))) & \end{aligned}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (&(\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge \\ (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2. (m2\_subset\_1 & (3) \\ X2 X0 X1) \Rightarrow (m1\_subset\_1 X2 X0)) \end{aligned}$$

Assume the following.

$$\forall X0. (l2\_bcialg\_1 X0) \Rightarrow ((l1\_bcialg\_1 X0) \wedge (l2\_struct\_0 X0)) \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_bcialg\_1 X0) \wedge ((v4\_bcialg\_1 \\ X0) \wedge ((v5\_bcialg\_1 X0) \wedge ((v7\_bcialg\_1 X0) \wedge (l2\_bcialg\_1 X0)))))) \Rightarrow \\ ((\neg v1\_xboole\_0 (k5\_bcialg\_1 X0)) \wedge (m1\_subset\_1 (k5\_bcialg\_1 \\ X0) (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(l2\_struct\_0 X0) \Rightarrow (m1\_subset\_1 (k4\_struct\_0 X0) (u1\_struct\_0 X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((\neg v2\_struct\_0 X0) \wedge ((v3\_bcialg\_1 X0) \wedge \\ ((v4\_bcialg\_1 X0) \wedge ((v5\_bcialg\_1 X0) \wedge ((v7\_bcialg\_1 X0) \wedge (l2\_bcialg\_1 \\ X0)))))) \wedge (m1\_subset\_1 X1 (u1\_struct\_0 X0))) \Rightarrow (m1\_subset\_1 (k4\_bcialg\_6 \\ X0 X1) k5\_numbers) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(((\neg v2\_struct\_0 X0) \wedge ((v3\_bcialg\_1 X0) \wedge ((v4\_bcialg\_1 \\ X0) \wedge ((v5\_bcialg\_1 X0) \wedge ((v7\_bcialg\_1 X0) \wedge (l2\_bcialg\_1 X0)))))) \Rightarrow \\ (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ((v1\_bcialg\_6 \\ X1 X0) \Rightarrow (\forall X2.(m1\_subset\_1 X2 k5\_numbers) \Rightarrow ((X2 = k4\_bcialg\_6 \\ X0 X1) \Leftrightarrow ((k3\_bcialg\_6 X0 X2 X1 \in k4\_bcialg\_1 X0) \wedge ((X2 \neq k6\_numbers) \wedge \\ (\forall X3.(m1\_subset\_1 X3 k5\_numbers) \Rightarrow ((k3\_bcialg\_6 X0 X3 X1 \in \\ k4\_bcialg\_1 X0) \Rightarrow ((X3 = k6\_numbers) \vee (r1\_xreal\_0 X2 X3)))))))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(((\neg v2\_struct\_0 X0) \wedge ((v3\_bcialg\_1 X0) \wedge ((v4\_bcialg\_1 \\ X0) \wedge ((v5\_bcialg\_1 X0) \wedge ((v7\_bcialg\_1 X0) \wedge (l2\_bcialg\_1 X0)))))) \Rightarrow \\ (k5\_bcialg\_1 X0 = ReplSep (toset (\lambda X1 : \iota.m1\_subset\_1 X1 (u1\_struct\_0 \\ X0))) (\lambda X1 : \iota.v10\_bcialg\_1 X1 X0) (\lambda X1 : \iota.X1))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(((\neg v2\_struct\_0 X0) \wedge ((v3\_bcialg\_1 X0) \wedge ((v4\_bcialg\_1 \\ X0) \wedge ((v5\_bcialg\_1 X0) \wedge ((v7\_bcialg\_1 X0) \wedge (l2\_bcialg\_1 X0)))))) \Rightarrow \\ (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ((v10\_bcialg\_1 \\ X1 X0) \Leftrightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow ((k1\_bcialg\_1 \\ X0 X2 X1 = k4\_struct\_0 X0) \Rightarrow (X2 = X1)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.(((\neg v2\_struct\_0 X0) \wedge ((v3\_bcialg\_1 X0) \wedge ((v4\_bcialg\_1 \\ X0) \wedge ((v5\_bcialg\_1 X0) \wedge ((v7\_bcialg\_1 X0) \wedge (l2\_bcialg\_1 X0)))))) \Rightarrow \\ (k4\_bcialg\_1 X0 = ReplSep (toset (\lambda X1 : \iota.m1\_subset\_1 X1 (u1\_struct\_0 \\ X0))) (\lambda X1 : \iota.r1\_bcialg\_1 X0 (k4\_struct\_0 X0) X1) (\lambda X1 : \\ \iota.X1))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l2\_bialg\_1 X0)) \Rightarrow (\forall X1. \\ & (m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (\forall X2.(m1\_subset\_1 X2 \\ & (u1\_struct\_0 X0)) \Rightarrow ((r1\_bialg\_1 X0 X1 X2) \Leftrightarrow (k1\_bialg\_1 X0 X1 X2 = \\ & k4\_struct\_0 X0)))) \end{aligned} \tag{12}$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (v1\_int\_1 X0) \tag{13}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_bialg\_1 X0) \wedge ((v4\_bialg\_1 \\ & X0) \wedge ((v5\_bialg\_1 X0) \wedge ((v7\_bialg\_1 X0) \wedge (l2\_bialg\_1 X0)))))) \Rightarrow \\ & (\forall X1.(m2\_subset\_1 X1 (u1\_struct\_0 X0) (k5\_bialg\_1 X0)) \Rightarrow \\ & (\forall X2.(v7\_ordinal1 X2) \Rightarrow (((v1\_bialg\_6 X1 X0) \wedge (k4\_bialg\_6 \\ & X0 X1 = X2)) \Rightarrow (k3\_bialg\_6 X0 X2 X1 = k4\_struct\_0 X0)))) \end{aligned}$$