

## t38\_bcialg\_6

(TMMmvdoQEeaE5fVq2oG6eMq8iqZ4kdgrkaW)

October 27, 2020

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  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v2\_bcialg\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  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  $v3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_funct\_1 : \iota \Rightarrow \iota$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $k2\_tops\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l1\_bcialg\_1 : \iota \Rightarrow o$  be given. Let  $l2\_struct\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(l1\_struct\_0 X0) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge \\ & (l1\_struct\_0 X1)) \Rightarrow (\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\ & X2 (u1\_struct\_0 X0) (u1\_struct\_0 X1)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X1)))))) \Rightarrow ((v3\_funct\_2 \\ & X2 (u1\_struct\_0 X0) (u1\_struct\_0 X1)) \Rightarrow (v3\_funct\_2 (k2\_tops\_2 \\ & (u1\_struct\_0 X0) (u1\_struct\_0 X1) X2) (u1\_struct\_0 X1) (u1\_struct\_0 \\ & X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(l2\_bcialg\_1 X0) \Rightarrow ((l1\_bcialg\_1 X0) \wedge (l2\_struct\_0 X0)) \tag{2}$$

Assume the following.

$$\forall X0.(l1\_bcialg\_1 X0) \Rightarrow (l1\_struct\_0 X0) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\ & X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))) \Rightarrow \\ & ((v3\_funct\_2 X2 X0 X1) \Rightarrow (k2\_tops\_2 X0 X1 X2 = k2\_funct\_1 X2)) \end{aligned} \tag{4}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_bcialg\_1 X0) \wedge ((v4\_bcialg\_1 \\ & X0) \wedge ((v5\_bcialg\_1 X0) \wedge ((v7\_bcialg\_1 X0) \wedge (l2\_bcialg\_1 X0)))))) \Rightarrow \\ & (\forall X1.((\neg v2\_struct\_0 X1) \wedge ((v3\_bcialg\_1 X1) \wedge ((v4\_bcialg\_1 \\ & X1) \wedge ((v5\_bcialg\_1 X1) \wedge ((v7\_bcialg\_1 X1) \wedge (l2\_bcialg\_1 X1)))))) \Rightarrow \\ & (\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 X1) \\ & (u1\_struct\_0 X0)) \wedge ((v2\_bcialg\_6 X2 X1 X0) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (u1\_struct\_0 X1) (u1\_struct\_0 X0)))))) \Rightarrow (\forall X3. \\ & ((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 X3 (u1\_struct\_0 X0) (u1\_struct\_0 \\ & X1)) \wedge ((v2\_bcialg\_6 X3 X0 X1) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & (u1\_struct\_0 X0) (u1\_struct\_0 X1)))))) \Rightarrow (((v3\_funct\_2 X2 (u1\_struct\_0 \\ & X1) (u1\_struct\_0 X0)) \wedge (X3 = k2\_funct\_1 X2)) \Rightarrow (v3\_funct\_2 X3 (u1\_struct\_0 \\ & X0) (u1\_struct\_0 X1)))))) \end{aligned}$$