

# t7\_bciideal (TM- GrVXFwTHRhfVbZUb5h6UQ24zVzW5DPsmu)

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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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_bcialg\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_bcialg\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_bcialg\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_bcialg\_1 X0) \wedge ((v4\_bcialg\_1 \\ X0) \wedge ((v5\_bcialg\_1 X0) \wedge ((v7\_bcialg\_1 X0) \wedge (l2\_bcialg\_1 X0)))))) \Rightarrow \\ (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (k1\_bcialg\_1 X0 \\ X1 (k4\_struct\_0 X0) = X1)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_bcialg\_1 X0) \wedge ((v4\_bcialg\_1 \\ X0) \wedge ((v5\_bcialg\_1 X0) \wedge ((v7\_bcialg\_1 X0) \wedge (l2\_bcialg\_1 X0)))))) \Rightarrow \\ (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ((X1 \in k5\_bcialg\_1 \\ X0) \Leftrightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow (k1\_bcialg\_1 \\ X0 X2 (k1\_bcialg\_1 X0 X2 X1) = X1)))) \end{aligned} \quad (2)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v3\_bcialg\_1 X0) \wedge ((v4\_bcialg\_1 \\ X0) \wedge ((v5\_bcialg\_1 X0) \wedge ((v7\_bcialg\_1 X0) \wedge (l2\_bcialg\_1 X0)))))) \Rightarrow \\ (\forall X1.(m2\_subset\_1 X1 (u1\_struct\_0 X0) (k5\_bcialg\_1 X0)) \Rightarrow \\ (\forall X2.(m2\_subset\_1 X2 (u1\_struct\_0 X0) (k7\_bcialg\_1 X0 X1)) \Rightarrow \\ (k1\_bcialg\_1 X0 X1 X2 = k4\_struct\_0 X0))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge((\neg v1\_xboole\_0 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))))\Rightarrow(\forall X2.(m2\_subset\_1 X2 X0 X1)\Rightarrow(m1\_subset\_1 X2 X0)) \quad (5)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0)\wedge((v3\_bcialg\_1 X0)\wedge((v4\_bcialg\_1 X0)\wedge((v5\_bcialg\_1 X0)\wedge((v7\_bcialg\_1 X0)\wedge(l2\_bcialg\_1 X0))))))\Rightarrow((\neg v1\_xboole\_0 (k5\_bcialg\_1 X0))\wedge(m1\_subset\_1 (k5\_bcialg\_1 X0) (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\Rightarrow((m1\_subset\_1 X1 X0)\Leftrightarrow(X1 \in X0)))\wedge((v1\_xboole\_0 X0)\Rightarrow((m1\_subset\_1 X1 X0)\Leftrightarrow(v1\_xboole\_0 X1))) \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))\Rightarrow(v1\_xboole\_0 X1)) \quad (8)$$

**Theorem 1**

$$\forall X0.((\neg v2\_struct\_0 X0)\wedge((v3\_bcialg\_1 X0)\wedge((v4\_bcialg\_1 X0)\wedge((v5\_bcialg\_1 X0)\wedge((v7\_bcialg\_1 X0)\wedge(l2\_bcialg\_1 X0))))))\Rightarrow(\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0))\Rightarrow(\forall X2.(m2\_subset\_1 X2 (u1\_struct\_0 X0) (k5\_bcialg\_1 X0))\Rightarrow(\forall X3.(m2\_subset\_1 X3 (u1\_struct\_0 X0) (k5\_bcialg\_1 X0))\Rightarrow((m2\_subset\_1 X2 (u1\_struct\_0 X0) (k7\_bcialg\_1 X0 X3))\Rightarrow(k1\_bcialg\_1 X0 X1 X2 = k1\_bcialg\_1 X0 X1 X3))))))$$