

t34\_ec\_pf\_2  
(TMWocoP9iGUcC2gFsJGpxjDVoHoS9d7oqBx)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_int\_2 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k9\_int\_3 : \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_ec\_pf\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_ec\_pf\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_ec\_pf\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_ec\_pf\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  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  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (2)$$

Assume the following.

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

Assume the following.

$$\forall X0. \forall X1. \forall X2. (((v7\_ordinal1 X0) \wedge (v1\_int\_2 X0)) \wedge ((m1\_subset\_1 X1 (u1\_struct\_0 (k9\_int\_3 X0))) \wedge (m1\_subset\_1 X2 (u1\_struct\_0 (k9\_int\_3 X0))))) \Rightarrow ((\neg v1\_xboole\_0 (k6\_ec\_pf\_1 X0 X1 X2)) \wedge (m1\_subset\_1 (k6\_ec\_pf\_1 X0 X1 X2) (k1\_zfmisc\_1 (k3\_ec\_pf\_1 (k9\_int\_3 X0))))) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((v7\_ordinal1\ X0)\wedge(v1\_int\_2 \\ & X0))\wedge((m1\_subset\_1\ X1\ (u1\_struct\_0\ (k9\_int\_3\ X0)))\wedge(m1\_subset\_1 \\ & X2\ (u1\_struct\_0\ (k9\_int\_3\ X0))))\Rightarrow((v1\_funct\_1\ (k5\_ec\_pf\_1\ X0 \\ & X1\ X2))\wedge((v1\_funct\_2\ (k5\_ec\_pf\_1\ X0\ X1\ X2)\ (k3\_zfmisc\_1\ (u1\_struct\_0 \\ & (k9\_int\_3\ X0))\ (u1\_struct\_0\ (k9\_int\_3\ X0))\ (u1\_struct\_0\ (k9\_int\_3 \\ & X0)))\ (u1\_struct\_0\ (k9\_int\_3\ X0)))\wedge(m1\_subset\_1\ (k5\_ec\_pf\_1 \\ & X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k3\_zfmisc\_1\ (u1\_struct\_0 \\ & (k9\_int\_3\ X0))\ (u1\_struct\_0\ (k9\_int\_3\ X0))\ (u1\_struct\_0\ (k9\_int\_3 \\ & X0)))\ (u1\_struct\_0\ (k9\_int\_3\ X0)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v7\_ordinal1\ X0)\wedge(v1\_int\_2\ X0))\Rightarrow(\forall X1.(m1\_subset\_1 \\ & X1\ (u1\_struct\_0\ (k9\_int\_3\ X0)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ ( \\ & u1\_struct\_0\ (k9\_int\_3\ X0)))\Rightarrow(k6\_ec\_pf\_1\ X0\ X1\ X2 = ReplSep\ (toset \\ & (\lambda X3 : \iota.m2\_subset\_1\ X3\ (k3\_zfmisc\_1\ (u1\_struct\_0\ (k9\_int\_3 \\ & X0))\ (u1\_struct\_0\ (k9\_int\_3\ X0))\ (u1\_struct\_0\ (k9\_int\_3\ X0))) \\ & (k3\_ec\_pf\_1\ (k9\_int\_3\ X0))))\ (\lambda X3 : \iota.k3\_funct\_2\ (k3\_zfmisc\_1 \\ & (u1\_struct\_0\ (k9\_int\_3\ X0))\ (u1\_struct\_0\ (k9\_int\_3\ X0))\ (u1\_struct\_0 \\ & (k9\_int\_3\ X0)))\ (u1\_struct\_0\ (k9\_int\_3\ X0))\ (k5\_ec\_pf\_1\ X0\ X1\ X2) \\ & X3 = k4\_struct\_0\ (k9\_int\_3\ X0))\ (\lambda X3 : \iota.X3)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v7\_ordinal1\ X0)\wedge(v1\_int\_2\ X0))\Rightarrow(\forall X1.(m2\_subset\_1 \\ & X1\ (k3\_zfmisc\_1\ (u1\_struct\_0\ (k9\_int\_3\ X0))\ (u1\_struct\_0\ (k9\_int\_3 \\ & X0))\ (u1\_struct\_0\ (k9\_int\_3\ X0)))\ (k3\_ec\_pf\_1\ (k9\_int\_3\ X0)))\Rightarrow \\ & (\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (k3\_zfmisc\_1\ (u1\_struct\_0 \\ & (k9\_int\_3\ X0))\ (u1\_struct\_0\ (k9\_int\_3\ X0))\ (u1\_struct\_0\ (k9\_int\_3 \\ & X0)))\ (u1\_struct\_0\ (k9\_int\_3\ X0)))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1\ (k3\_zfmisc\_1\ (u1\_struct\_0\ (k9\_int\_3\ X0))\ (u1\_struct\_0 \\ & (k9\_int\_3\ X0))\ (u1\_struct\_0\ (k9\_int\_3\ X0)))\ (u1\_struct\_0\ (k9\_int\_3 \\ & X0))))))\Rightarrow((r1\_ec\_pf\_2\ X0\ X1\ X2)\Leftrightarrow(k3\_funct\_2\ (k3\_zfmisc\_1\ (u1\_struct\_0 \\ & (k9\_int\_3\ X0))\ (u1\_struct\_0\ (k9\_int\_3\ X0))\ (u1\_struct\_0\ (k9\_int\_3 \\ & X0)))\ (u1\_struct\_0\ (k9\_int\_3\ X0))\ X2\ X1 = k4\_struct\_0\ (k9\_int\_3 \\ & X0)))) \end{aligned} \quad (7)$$

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**

$$\begin{aligned} \forall X0.((v7\_ordinal1\ X0)\wedge(v1\_int\_2\ X0))\Rightarrow(\forall X1.(m1\_subset\_1 \\ X1\ (u1\_struct\_0\ (k9\_int\_3\ X0)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ ( \\ u1\_struct\_0\ (k9\_int\_3\ X0)))\Rightarrow(\forall X3.(m2\_subset\_1\ X3\ (k3\_zfmisc\_1 \\ (u1\_struct\_0\ (k9\_int\_3\ X0))\ (u1\_struct\_0\ (k9\_int\_3\ X0))\ (u1\_struct\_0 \\ (k9\_int\_3\ X0)))\ (k3\_ec\_pf\_1\ (k9\_int\_3\ X0)))\Rightarrow((r1\_ec\_pf\_2\ X0\ X3 \\ (k5\_ec\_pf\_1\ X0\ X1\ X2))\Leftrightarrow(m2\_subset\_1\ X3\ (k3\_ec\_pf\_1\ (k9\_int\_3\ X0)) \\ (k6\_ec\_pf\_1\ X0\ X1\ X2)))))) \end{aligned}$$