

## t34\_modelc\_1

(TMXYS26sgX7CNzKmkQvLjAnvnjWa74UBXEw)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  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  $k30\_modelc\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r3\_modelc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k52\_modelc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k51\_modelc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k48\_modelc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((v1\_partfun1 X1 X0) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0)))) \Rightarrow (\forall X2. \\ & ((\neg v1\_xboole\_0 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k30\_modelc\_1 \\ & X0)))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 X0)) \Rightarrow (k51\_modelc\_1 \\ & X0 X1 X2 (k52\_modelc\_1 X0 X1 X2 X3) = X3)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0 X0) \wedge \\ & (((v1\_partfun1 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X0)))) \wedge (((\neg v1\_xboole\_0 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 ( \\ & k30\_modelc\_1 X0)))) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 X0)))) \Rightarrow (m1\_subset\_1 \\ & (k52\_modelc\_1 X0 X1 X2 X3) (u1\_struct\_0 (k48\_modelc\_1 X0 X1 X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((v1\_partfun1 X1 X0) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0)))) \Rightarrow (\forall X2. \\ & ((\neg v1\_xboole\_0 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k30\_modelc\_1 \\ & X0)))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 (k48\_modelc\_1 \\ & X0 X1 X2))) \Rightarrow (k51\_modelc\_1 X0 X1 X2 X3 = ReplSep (toset (\lambda X4 : \iota. \\ & m1\_subset\_1 X4 X0)) (\lambda X4 : \iota.r3\_modelc\_1 X0 X1 X2 X4 X3) (\lambda X4 : \\ & \iota.X4)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski X0 X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \quad (4)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((v1\_partfun1 X1 X0) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0)))) \Rightarrow (\forall X2. \\ & ((\neg v1\_xboole\_0 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k30\_modelc\_1 \\ & X0)))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 X0)) \Rightarrow (\forall X4. \\ & (m1\_subset\_1 X4 (k1\_zfmisc\_1 X0)) \Rightarrow ((r1\_tarski X3 X4) \Rightarrow (\forall X5. \\ & (m1\_subset\_1 X5 X0) \Rightarrow ((r3\_modelc\_1 X0 X1 X2 X5 (k52\_modelc\_1 X0 X1 \\ & X2 X3)) \Rightarrow (r3\_modelc\_1 X0 X1 X2 X5 (k52\_modelc\_1 X0 X1 X2 X4)))))))))) \end{aligned}$$