

## t37\_modelc\_1

(TMH9UedWrxvWXoncsSZ47BTWRDB9iFvKgmq)

October 27, 2020

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  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k48\_modelc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k54\_modelc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r3\_modelc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k53\_modelc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k51\_modelc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k52\_modelc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. ((v1\_partfun1 X1 X0) \wedge \\
 & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0)))) \Rightarrow (\forall X2. \\
 & ((\neg v1\_xboole\_0 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k30\_modelc\_1 \\
 & X0)))) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (u1\_struct\_0 (k48\_modelc\_1 \\
 & X0 X1 X2))) \Rightarrow (\forall X4. (m1\_subset\_1 X4 (u1\_struct\_0 (k48\_modelc\_1 \\
 & X0 X1 X2))) \Rightarrow (\forall X5. (m1\_subset\_1 X5 (u1\_struct\_0 (k48\_modelc\_1 \\
 & X0 X1 X2))) \Rightarrow ((\forall X6. (m1\_subset\_1 X6 X0) \Rightarrow ((r3\_modelc\_1 X0 \\
 & X1 X2 X6 X4) \Rightarrow (r3\_modelc\_1 X0 X1 X2 X6 X5))) \Rightarrow (\forall X6. (m1\_subset\_1 \\
 & X6 X0) \Rightarrow ((r3\_modelc\_1 X0 X1 X2 X6 (k53\_modelc\_1 X0 X1 X2 X3 X4)) \Rightarrow (r3\_modelc\_1 \\
 & X0 X1 X2 X6 (k53\_modelc\_1 X0 X1 X2 X3 X5))))))))) \\
 & \tag{1}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. ((v1\_partfun1 X1 X0) \wedge \\
 & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0)))) \Rightarrow (\forall X2. \\
 & ((\neg v1\_xboole\_0 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k30\_modelc\_1 \\
 & X0)))) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (u1\_struct\_0 (k48\_modelc\_1 \\
 & X0 X1 X2))) \Rightarrow (\forall X4. (m1\_subset\_1 X4 (u1\_struct\_0 (k48\_modelc\_1 \\
 & X0 X1 X2))) \Rightarrow ((\forall X5. (m1\_subset\_1 X5 X0) \Rightarrow ((r3\_modelc\_1 X0 \\
 & X1 X2 X5 X3) \Rightarrow (r3\_modelc\_1 X0 X1 X2 X5 X4))) \Rightarrow (r1\_tarski (k51\_modelc\_1 \\
 & X0 X1 X2 X3) (k51\_modelc\_1 X0 X1 X2 X4)))))) \\
 & \tag{2}
 \end{aligned}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((v1\_partfun1 X1 X0) \wedge \\
& (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0)))) \Rightarrow (\forall X2. \\
& ((\neg v1\_xboole\_0 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k30\_modelc\_1 \\
& X0)))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (k1\_zfmisc\_1 X0)) \Rightarrow (\forall X4. \\
& (m1\_subset\_1 X4 (k1\_zfmisc\_1 X0)) \Rightarrow ((r1\_tarski X3 X4) \Rightarrow (\forall X5. \\
& (m1\_subset\_1 X5 X0) \Rightarrow ((r3\_modelc\_1 X0 X1 X2 X5 (k52\_modelc\_1 X0 X1 \\
& X2 X3)) \Rightarrow (r3\_modelc\_1 X0 X1 X2 X5 (k52\_modelc\_1 X0 X1 X2 X4)))))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((\neg v1\_xboole\_0 \\
& X0) \wedge (((v1\_partfun1 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& X0 X0)))) \wedge (((\neg v1\_xboole\_0 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 ( \\
& k30\_modelc\_1 X0)))) \wedge ((m1\_subset\_1 X3 (u1\_struct\_0 (k48\_modelc\_1 \\
& X0 X1 X2)) \wedge (m1\_subset\_1 X4 (u1\_struct\_0 (k48\_modelc\_1 X0 X1 X2)))))) \Rightarrow \\
& (m1\_subset\_1 (k53\_modelc\_1 X0 X1 X2 X3 X4) (u1\_struct\_0 (k48\_modelc\_1 \\
& X0 X1 X2))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0 X0) \wedge \\
& (((v1\_partfun1 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& X0 X0)))) \wedge (((\neg v1\_xboole\_0 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 ( \\
& k30\_modelc\_1 X0)))) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 X0)))) \Rightarrow (m1\_subset\_1 \\
& (k52\_modelc\_1 X0 X1 X2 X3) (u1\_struct\_0 (k48\_modelc\_1 X0 X1 X2)))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((v1\_partfun1 X1 X0) \wedge \\
& (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0)))) \Rightarrow (\forall X2. \\
& ((\neg v1\_xboole\_0 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k30\_modelc\_1 \\
& X0)))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 (k48\_modelc\_1 \\
& X0 X1 X2)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (k1\_zfmisc\_1 X0)) \Rightarrow (k54\_modelc\_1 \\
& X0 X1 X2 X3 X4 = k51\_modelc\_1 X0 X1 X2 (k53\_modelc\_1 X0 X1 X2 X3 (k52\_modelc\_1 \\
& X0 X1 X2 X4))))))
\end{aligned} \tag{6}$$

### Theorem 1

$$\begin{aligned}
& \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((v1\_partfun1 X1 X0) \wedge \\
& (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0)))) \Rightarrow (\forall X2. \\
& ((\neg v1\_xboole\_0 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k30\_modelc\_1 \\
& X0)))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 (k48\_modelc\_1 \\
& X0 X1 X2)) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (k1\_zfmisc\_1 X0)) \Rightarrow (\forall X5. \\
& (m1\_subset\_1 X5 (k1\_zfmisc\_1 X0)) \Rightarrow ((r1\_tarski X4 X5) \Rightarrow (r1\_tarski \\
& (k54\_modelc\_1 X0 X1 X2 X3 X4) (k54\_modelc\_1 X0 X1 X2 X3 X5))))))
\end{aligned}$$