

t17\_yellow17

(TMXv2HcC9HFsqJ3Vn44Ts83fnnCgTa9dXd8)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_waybel\_3 : \iota \Rightarrow o$  be given. Let  $v1\_waybel18 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_waybel18 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_waybel18 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k8\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_waybel18 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_waybel18 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $k2\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v3\_pre\_topc : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge ( \\ (v4\_relat\_1 X1 X0) \wedge ((v1\_funct\_1 X1) \wedge ((v1\_partfun1 X1 X0) \wedge ((v4\_waybel\_3 \\ X1) \wedge (v1\_waybel18 X1)))))) \Rightarrow (\forall X2. \neg (X2 \in k2\_waybel18 X0 X1) \wedge \\ (\forall X3.(m1\_subset\_1 X3 X0) \Rightarrow (\forall X4.(m1\_subset\_1 X4 ( \\ k1\_zfmisc\_1 (u1\_struct\_0 (k4\_waybel18 X0 X1 X3)))) \Rightarrow (\neg (v3\_pre\_topc \\ X4 (k4\_waybel18 X0 X1 X3)) \wedge (k8\_relset\_1 (u1\_struct\_0 (k3\_waybel18 \\ X0 X1)) (u1\_struct\_0 (k4\_waybel18 X0 X1 X3)) (k6\_waybel18 X0 X1 X3) \\ X4 = X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge ( \\ (v4\_relat\_1 X1 X0) \wedge ((v1\_funct\_1 X1) \wedge ((v1\_partfun1 X1 X0) \wedge ((v4\_waybel\_3 \\ X1) \wedge (v1\_waybel18 X1)))))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 X0) \Rightarrow ( \\ \forall X3.(m1\_subset\_1 X3 X0) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 \\ (k4\_waybel18 X0 X1 X2))) \Rightarrow (\forall X5.(m1\_subset\_1 X5 (k1\_zfmisc\_1 \\ (u1\_struct\_0 (k4\_waybel18 X0 X1 X3)))) \Rightarrow ((X5 \neq k2\_struct\_0 (k4\_waybel18 \\ X0 X1 X3)) \Rightarrow ((r1\_tarski (k8\_relset\_1 (u1\_struct\_0 (k3\_waybel18 \\ X0 X1)) (u1\_struct\_0 (k4\_waybel18 X0 X1 X2)) (k6\_waybel18 X0 X1 X2) \\ (k1\_tarski X4)) (k8\_relset\_1 (u1\_struct\_0 (k3\_waybel18 X0 X1)) \\ (u1\_struct\_0 (k4\_waybel18 X0 X1 X3)) (k6\_waybel18 X0 X1 X3) X5)) \Leftrightarrow \\ ((X2 = X3) \wedge (X4 \in X5))))))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge \\
& (v4\_relat\_1 X1 X0) \wedge ((v1\_funct\_1 X1) \wedge ((v1\_partfun1 X1 X0) \wedge ((v4\_waybel\_3 \\
& X1) \wedge (v1\_waybel18 X1)))))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 X0) \Rightarrow ( \\
& k8\_relset\_1 (u1\_struct\_0 (k3\_waybel18 X0 X1)) (u1\_struct\_0 (k4\_waybel18 \\
& X0 X1 X2)) (k6\_waybel18 X0 X1 X2) (k2\_struct\_0 (k4\_waybel18 X0 X1 \\
& X2)) = k2\_struct\_0 (k3\_waybel18 X0 X1))))
\end{aligned} \tag{3}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge ( \\
& (v4\_relat\_1 X1 X0) \wedge ((v1\_funct\_1 X1) \wedge ((v1\_partfun1 X1 X0) \wedge ((v4\_waybel\_3 \\
& X1) \wedge (v1\_waybel18 X1)))))) \Rightarrow (\forall X2.(m1\_subset\_1 X2 X0) \Rightarrow ( \\
& \forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 (k4\_waybel18 X0 X1 X2))) \Rightarrow \\
& (\forall X4. \neg (X4 \in k2\_waybel18 X0 X1) \wedge (r1\_tarski (k8\_relset\_1 \\
& (u1\_struct\_0 (k3\_waybel18 X0 X1)) (u1\_struct\_0 (k4\_waybel18 X0 \\
& X1 X2)) (k6\_waybel18 X0 X1 X2) (k1\_tarski X3)) X4) \wedge ((X4 \neq k2\_struct\_0 \\
& (k3\_waybel18 X0 X1)) \wedge (\forall X5.(m1\_subset\_1 X5 (k1\_zfmisc\_1 \\
& (u1\_struct\_0 (k4\_waybel18 X0 X1 X2)))) \Rightarrow (\neg (X5 \neq k2\_struct\_0 (k4\_waybel18 \\
& X0 X1 X2)) \wedge ((X3 \in X5) \wedge ((v3\_pre\_topc X5 (k4\_waybel18 X0 X1 X2)) \wedge ( \\
& X4 = k8\_relset\_1 (u1\_struct\_0 (k3\_waybel18 X0 X1)) (u1\_struct\_0 \\
& (k4\_waybel18 X0 X1 X2)) (k6\_waybel18 X0 X1 X2) X5))))))))))
\end{aligned}$$