

### t33\_rewrite3

(TMU7S4aXYF29WtGtTKhyz3oZSVCBgvzVZCK)

October 27, 2020

Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k8\_afinsq\_1 : \iota \Rightarrow \iota$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_rewrite3 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_rewrite3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. (\neg v1\_xboole\_0 X2) \Rightarrow (\forall X3. \\
 & \quad (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k8\_afinsq\_1 X2))) \Rightarrow (\forall X4. \\
 & ((\neg v2\_struct\_0 X4) \wedge (l1\_rewrite3 X4 X3)) \Rightarrow (\neg (k4\_tarski X0 X1 \in k1\_rewrite3 \\
 & \quad X2 X3 X4) \wedge (\forall X5. (m1\_subset\_1 X5 (u1\_struct\_0 X4)) \Rightarrow (\forall X6. \\
 & \quad (m1\_subset\_1 X6 (k8\_afinsq\_1 X2)) \Rightarrow (\forall X7. (m1\_subset\_1 X7 \\
 & \quad (u1\_struct\_0 X4)) \Rightarrow (\forall X8. (m1\_subset\_1 X8 (k8\_afinsq\_1 X2)) \Rightarrow \\
 & \quad (\neg (X0 = k4\_tarski X5 X6) \wedge (X1 = k4\_tarski X7 X8))))))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. ((\neg v1\_xboole\_0 X0) \wedge ((m1\_subset\_1 \\
 & \quad X1 (k1\_zfmisc\_1 (k8\_afinsq\_1 X0))) \wedge ((\neg v2\_struct\_0 X2) \wedge (l1\_rewrite3 \\
 & \quad X2 X1)))) \Rightarrow (m1\_subset\_1 (k1\_rewrite3 X0 X1 X2) (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
 & \quad (k2\_zfmisc\_1 (u1\_struct\_0 X2) (k8\_afinsq\_1 X0)) (k2\_zfmisc\_1 \\
 & \quad (u1\_struct\_0 X2) (k8\_afinsq\_1 X0))))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. (v1\_relat\_1 X0) \Leftrightarrow (\forall X1. \neg (X1 \in X0) \wedge (\forall X2. \\
 & \quad \forall X3. X1 \neq k4\_tarski X2 X3))
 \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\
 & \quad (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2)
 \end{aligned} \tag{4}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.\forall X1.(\neg v1\_xboole\_0 X1)\Rightarrow(\forall X2.(m1\_subset\_1 \\ & X2 (k1\_zfmisc\_1 (k8\_afinsq\_1 X1)))\Rightarrow(\forall X3.((\neg v2\_struct\_0 \\ & X3)\wedge(l1\_rewrite3 X3 X2))\Rightarrow(\neg(X0 \in k1\_rewrite3 X1 X2 X3)\wedge(\forall X4. \\ & (m1\_subset\_1 X4 (u1\_struct\_0 X3))\Rightarrow(\forall X5.(m1\_subset\_1 X5 \\ & (u1\_struct\_0 X3))\Rightarrow(\forall X6.(m1\_subset\_1 X6 (k8\_afinsq\_1 X1))\Rightarrow \\ & (\forall X7.(m1\_subset\_1 X7 (k8\_afinsq\_1 X1))\Rightarrow(X0\neq k4\_tarski \\ & (k4\_tarski X4 X6) (k4\_tarski X5 X7)))))))))) \end{aligned}$$