

t20\_aofa\_000 (TMGbwfL-  
CivU8EWLdq2qgFvHnV7DVTjHFvf)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_unialg\_1 : \iota \Rightarrow o$  be given. Let  $v3\_unialg\_1 : \iota \Rightarrow o$  be given. Let  $v4\_unialg\_1 : \iota \Rightarrow o$  be given. Let  $l1\_unialg\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k9\_aofa\_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k4\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_unialg\_1 : \iota \Rightarrow \iota$  be given. Let  $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_finseq\_2 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_pua2mss1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
& \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 \\
& X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))) \Rightarrow (\forall X1. (m1\_subset\_1 \\
& X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X2. (v7\_ordinal1 \\
& X2) \Rightarrow (k9\_aofa\_000 X0 X1 (k1\_nat\_1 X2 np\_1) = k2\_xboole\_0 (k9\_aofa\_000 \\
& X0 X1 X2) (ReplSep2 (toset (\lambda X3 : \iota. m2\_subset\_1 X3 k5\_numbers \\
& (k4\_finseq\_1 (u1\_unialg\_1 X0)))) (\lambda X3 : \iota. toset (\lambda X4 : \\
& \iota. m2\_finseq\_2 X4 (u1\_struct\_0 X0) (k3\_finseq\_2 (u1\_struct\_0 \\
& X0)))) (\lambda X3 : \iota. \lambda X4 : \iota. (X4 \in k1\_relset\_1 (k3\_finseq\_2 \\
& (u1\_struct\_0 X0) (k2\_pua2mss1 X0 X3)) \wedge (r1\_tarski (k2\_relset\_1 \\
& (u1\_struct\_0 X0) X4) (k9\_aofa\_000 X0 X1 X2))) (\lambda X3 : \iota. \lambda X4 : \\
& \iota. k1\_funct\_1 (k2\_pua2mss1 X0 X3) X4))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (X2 = k2\_xboole\_0 X0 X1) \Leftrightarrow (\forall X3. \\
& (X3 \in X2) \Leftrightarrow ((X3 \in X0) \vee (X3 \in X1)))
\end{aligned} \tag{2}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_unialg\_1 X0) \wedge ((v3\_unialg\_1 \\ & X0) \wedge ((v4\_unialg\_1 X0) \wedge (l1\_unialg\_1 X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))) \Rightarrow (\forall X2.(v7\_ordinal1 \\ & X2) \Rightarrow (\forall X3.(X3 \in k9\_aofa\_000 X0 X1 (k1\_nat\_1 X2 np\_1)) \Leftrightarrow (\neg \\ & (\neg X3 \in k9\_aofa\_000 X0 X1 X2) \wedge (\forall X4.(m2\_subset\_1 X4 k5\_numbers \\ & (k4\_finseq\_1 (u1\_unialg\_1 X0))) \Rightarrow (\forall X5.(m2\_finseq\_2 X5 \\ & (u1\_struct\_0 X0) (k3\_finseq\_2 (u1\_struct\_0 X0))) \Rightarrow (\neg (X3 = k1\_funct\_1 \\ & (k2\_pua2mss1 X0 X4) X5) \wedge ((X5 \in k1\_relset\_1 (k3\_finseq\_2 (u1\_struct\_0 \\ & X0)) (k2\_pua2mss1 X0 X4)) \wedge (r1\_tarski (k2\_relset\_1 (u1\_struct\_0 \\ & X0) X5) (k9\_aofa\_000 X0 X1 X2)))))))))) \end{aligned}$$