

# t8\_knaster (TMZp- kWhEJ1NuFpTqgGRo3CpqCVXRVphxkCG)

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Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_setfam\_1 : \iota \Rightarrow \iota$  be given. Let  $v6\_cohsp\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r2\_abian : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_knaster : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_knaster : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 (k9\_setfam\_1 \\ & X0) (k9\_setfam\_1 X0)) \wedge ((v6\_cohsp\_1 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (k9\_setfam\_1 X0) (k9\_setfam\_1 X0)))))) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0)) \Rightarrow ((r1\_tarski X2 (k3\_funct\_2 \\ & (k1\_zfmisc\_1 X0) (k9\_setfam\_1 X0) X1 X2)) \Rightarrow (r1\_tarski X2 (k2\_knaster \\ & X0 X1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 (k9\_setfam\_1 \\ & X0) (k9\_setfam\_1 X0)) \wedge ((v6\_cohsp\_1 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (k9\_setfam\_1 X0) (k9\_setfam\_1 X0)))))) \Rightarrow (\forall X2. \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0)) \Rightarrow ((r1\_tarski (k3\_funct\_2 (k1\_zfmisc\_1 \\ & X0) (k9\_setfam\_1 X0) X1 X2) X2) \Rightarrow (r1\_tarski (k1\_knaster X0 X1) X2))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. k9\_setfam\_1 X0 = k1\_zfmisc\_1 X0 \tag{3}$$

Assume the following.

$$\forall X0. \neg v1\_xboole\_0 (k1\_zfmisc\_1 X0) \tag{4}$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 X0) \Rightarrow \\ (\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 X0 X0) \wedge (m1\_subset\_1 \\ X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0)))))) \Rightarrow ((r2\_abian X0 X1 X2) \Leftrightarrow ( \\ X1 = k3\_funct\_2 X0 X0 X2 X1)))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1\_tarSKI X0 X1) \wedge (r1\_tarSKI X1 X0)) \quad (6)$$

**Theorem 1**

$$\begin{aligned} \forall X0.\forall X1.((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 (k9\_setfam\_1 \\ X0) (k9\_setfam\_1 X0)) \wedge ((v6\_cohsp\_1 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ (k2\_zfmisc\_1 (k9\_setfam\_1 X0) (k9\_setfam\_1 X0))))))) \Rightarrow (\forall X2. \\ (m1\_subset\_1 X2 (k1\_zfmisc\_1 X0)) \Rightarrow ((r2\_abian (k9\_setfam\_1 X0) \\ X2 X1) \Rightarrow ((r1\_tarSKI (k1\_knaster X0 X1) X2) \wedge (r1\_tarSKI X2 (k2\_knaster \\ X0 X1)))))) \end{aligned}$$