

t30\_normform  
(TMRLTefvncmz6toLJTvyzMLrZSRwuMX1Zff)

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Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_finsub\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_normform : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k2\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v4\_finsub\_1 : \iota \Rightarrow o$  be given. Let  $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((r1\_tarski X0 X1) \wedge \\ & ((r1\_tarski X2 X3) \wedge (r1\_xboole\_0 X1 X3))) \Rightarrow (r1\_xboole\_0 X0 X2) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k2\_zfmisc\_1 (k5\_finsub\_1 \\ & X0) (k5\_finsub\_1 X0))) \Rightarrow ((X1 \in k7\_normform X0) \Leftrightarrow (r1\_xboole\_0 (k2\_domain\_1 \\ & (k5\_finsub\_1 X0) (k5\_finsub\_1 X0) X1) (k3\_domain\_1 (k5\_finsub\_1 \\ & X0) (k5\_finsub\_1 X0) X1))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k5\_finsub\_1 X0)) \Rightarrow (\forall X2. \\ & (r1\_tarski X2 X1) \Rightarrow (m1\_subset\_1 X2 (k5\_finsub\_1 X0))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge((\neg v1\_xboole\_0 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))))\Rightarrow(\forall X2.(m2\_subset\_1 X2 X0 X1)\Leftrightarrow(m1\_subset\_1 X2 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 X0)\wedge((\neg v1\_xboole\_0 X1)\wedge(m1\_subset\_1 X2 (k2\_zfmisc\_1 X0 X1))))\Rightarrow(k3\_domain\_1 X0 X1 X2 = k2\_xtuple\_0 X2) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 X0)\wedge((\neg v1\_xboole\_0 X1)\wedge(m1\_subset\_1 X2 (k2\_zfmisc\_1 X0 X1))))\Rightarrow(k2\_domain\_1 X0 X1 X2 = k1\_xtuple\_0 X2) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.k2\_xtuple\_0 (k4\_tarski X0 X1) = X1 \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.k1\_xtuple\_0 (k4\_tarski X0 X1) = X0 \quad (11)$$

Assume the following.

$$\forall X0.\neg v1\_xboole\_0 (k7\_normform X0) \quad (12)$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0 (k5\_finsub\_1 X0))\wedge(v4\_finsub\_1 (k5\_finsub\_1 X0)) \quad (13)$$

Assume the following.

$$\forall X0.m1\_subset\_1 (k7\_normform X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k5\_finsub\_1 X0) (k5\_finsub\_1 X0))) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 X0)\wedge((\neg v1\_xboole\_0 X1)\wedge(m1\_subset\_1 X2 (k2\_zfmisc\_1 X0 X1))))\Rightarrow(m1\_subset\_1 (k3\_domain\_1 X0 X1 X2) X1) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 X0)\wedge((\neg v1\_xboole\_0 X1)\wedge(m1\_subset\_1 X2 (k2\_zfmisc\_1 X0 X1))))\Rightarrow(m1\_subset\_1 (k2\_domain\_1 X0 X1 X2) X0) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.k4\_tarSKI X0 X1 = k2\_tarSKI (k2\_tarSKI X0 X1) (k1\_tarSKI X0) \quad (17)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k2\_zfmisc\_1 X0 X1) \Leftrightarrow (\forall X3.(X3 \in X2) \Leftrightarrow (\exists X4.\exists X5.(X4 \in X0) \wedge ((X5 \in X1) \wedge (X3 = k4\_tarSKI X4 X5)))) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.k2\_tarSKI X0 X1 = k2\_tarSKI X1 X0 \quad (19)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (v1\_xboole\_0 X1)) \quad (20)$$

**Theorem 1**

$$\forall X0.\forall X1.(m2\_subset\_1 X1 (k2\_zfmisc\_1 (k5\_finsub\_1 X0) (k5\_finsub\_1 X0)) (k7\_normform X0)) \Rightarrow (\forall X2.\forall X3.((r1\_tarSKI X2 (k2\_domain\_1 (k5\_finsub\_1 X0) (k5\_finsub\_1 X0) X1)) \wedge (r1\_tarSKI X3 (k3\_domain\_1 (k5\_finsub\_1 X0) (k5\_finsub\_1 X0) X1))) \Rightarrow (m2\_subset\_1 (k4\_tarSKI X2 X3) (k2\_zfmisc\_1 (k5\_finsub\_1 X0) (k5\_finsub\_1 X0)) (k7\_normform X0)))$$