

t19\_moebius1 (TM-  
SpHZ7JrnwUNhAuVqt4B9FqMj3M5ha5UrW)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_int\_2 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k11\_nat\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_nat\_d : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k3\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1\_xboole\_0 X0) \wedge (v7\_ordinal1 X0)) \Rightarrow (\forall X1. \\ & ((\neg v1\_xboole\_0 X1) \wedge (v7\_ordinal1 X1)) \Rightarrow (\neg (\forall X2.(m2\_subset\_1 \\ & X2 k1\_numbers k5\_numbers) \Rightarrow ((v1\_int\_2 X2) \Rightarrow (r1\_xxreal\_0 (k11\_nat\_3 \\ & X0 X2) (k11\_nat\_3 X1 X2)))))) \wedge (\forall X2.(m2\_subset\_1 X2 k1\_numbers \\ & k5\_numbers) \Rightarrow (X1 \neq k3\_nat\_1 X0 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2.(m2\_subset\_1 \\ & X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \end{aligned} \tag{3}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v7\_ordinal1 X0) \wedge (m1\_subset\_1 X1 k5\_numbers)) \Rightarrow \\ & (k3\_nat\_1 X0 X1 = k3\_xcmplx\_0 X0 X1) \end{aligned} \tag{5}$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1) \wedge (v3\_ordinal1 k4\_ordinal1) \tag{6}$$

Assume the following.

$$m1\_subset\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k1\_numbers) \quad (7)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow ((r1\_nat\_d\ X0\ X1) \Leftrightarrow (\exists X2.(v7\_ordinal1\ X2) \wedge (X1 = k3\_xcmplx\_0\ X0\ X2)))) \quad (8)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Leftrightarrow (X0 \in k4\_ordinal1) \quad (9)$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1) \Rightarrow (v7\_ordinal1\ X0) \quad (10)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)) \Rightarrow (v1\_xboole\_0\ X1)) \quad (11)$$

**Theorem 1**

$$\forall X0.((\neg v1\_xboole\_0\ X0) \wedge (v7\_ordinal1\ X0)) \Rightarrow (\forall X1.((\neg v1\_xboole\_0\ X1) \wedge (v7\_ordinal1\ X1)) \Rightarrow ((\forall X2.((v7\_ordinal1\ X2) \wedge (v1\_int\_2\ X2)) \Rightarrow (r1\_xxreal\_0\ (k11\_nat\_3\ X0\ X2)\ (k11\_nat\_3\ X1\ X2))) \Rightarrow (r1\_nat\_d\ X0\ X1)))$$