

t16\_jordan2c  
(TMLsy5LBVcMnGZhnZwWjofQXioFFFCMhpuq)

October 27, 2020

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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k15\_euclid : \iota \Rightarrow \iota$  be given. Let  $r2\_jordan2c : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $r3\_connsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $l1\_rltopsp1 : \iota \Rightarrow o$  be given. Let  $l1\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v5\_rltopsp1 : \iota \Rightarrow o$  be given. Let  $v9\_rltopsp1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.(l1\_pre\_topc\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1 \\ (u1\_struct\_0\ X0))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1 \\ (u1\_struct\_0\ X0))) \Rightarrow ((r3\_connsp\_1\ X0\ X2\ X1) \Rightarrow (r1\_tarski\ X1\ X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((\neg v1\_xboole\_0\ X0) \wedge ((\neg v1\_xboole\_0\ X1) \wedge \\ (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)))) \Rightarrow (\forall X2.(m2\_subset\_1 \\ X2\ X0\ X1) \Leftrightarrow (m1\_subset\_1\ X2\ X1)) \end{aligned} \quad (2)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (3)$$

Assume the following.

$$(\neg v1\_xboole\_0\ k4\_ordinal1) \wedge (v3\_ordinal1\ k4\_ordinal1) \quad (4)$$

Assume the following.

$$v6\_membered\ k4\_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.(l1\_rltopsp1\ X0) \Rightarrow ((l1\_rlvect\_1\ X0) \wedge (l1\_pre\_topc\ X0)) \quad (6)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(m1\_subset\_1\ (k3\_subset\_1\ X0\ X1)\ (k1\_zfmisc\_1\ X0)) \quad (8)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow((v5\_rltopsp1\ (k15\_euclid\ X0))\wedge (l1\_rltopsp1\ (k15\_euclid\ X0))) \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ X0))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ X0))))\Rightarrow((r2\_jordan2c\ X0\ X1\ X2)\Leftrightarrow((r3\_connsp\_1\ (k15\_euclid\ X0)\ (k3\_subset\_1\ (u1\_struct\_0\ (k15\_euclid\ X0))\ X1)\ X2)\wedge(\neg v9\_rltopsp1\ X2\ (k15\_euclid\ X0)))))) \end{aligned} \quad (10)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v6\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow(v7\_ordinal1\ X1)) \quad (12)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(m2\_subset\_1\ X0\ k1\_numbers\ k5\_numbers)\Rightarrow(\forall X1. (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ X0))))\Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ X0))))\Rightarrow((r2\_jordan2c\ X0\ X1\ X2)\Rightarrow(r1\_tarski\ X2\ (k3\_subset\_1\ (u1\_struct\_0\ (k15\_euclid\ X0))\ X1)))))) \end{aligned}$$