t37_jordan22 (TMU-JsPZA9qnEHYpKhMVjS1wkjoZUJFMGtzi)

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Let $v1\_topreal2 : \iota \Rightarrow o$ 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 $k15\_euclid : \iota \Rightarrow \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $k2\_jordan21 : \iota \Rightarrow \iota$ be given. Let $k9\_jordan6 : \iota \Rightarrow \iota$ be given. Let $k1\_jordan21 : \iota \Rightarrow \iota$ be given. Let $k8\_jordan6 : \iota \Rightarrow \iota$ be given. Let $r1\_jordan6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_jordan19 : \iota \Rightarrow \iota$ be given. Let $k3\_jordan19 : \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k18\_pscomp\_1 : \iota \Rightarrow \iota$ be given. Let $r1\_jordan5c : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k22\_pscomp\_1 : \iota \Rightarrow \iota$ be given. Let $v2\_compts\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v1\_topreal2\ X0) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))) \Rightarrow (\neg(X1 \in X0) \wedge ((X2 \in X0) \wedge ((\neg r1\_jordan6\ X0\ X1\ X2) \wedge (\neg r1\_jordan6\ X0\ X2\ X1))))))) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_topreal2\ X0) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))))) \Rightarrow (\neg(k2\_jordan21\ X0 \in k8\_jordan6\ X0) \wedge (k1\_jordan21\ X0 \in k8\_jordan6\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2))) \Rightarrow (m1\_subset\_1\ X0\ X2) \tag{3}$$

Assume the following.

$$\forall X0.((v1\_topreal2\ X0) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))))) \Rightarrow (\neg(k2\_jordan21\ X0 \in k9\_jordan6\ X0) \wedge (k1\_jordan21\ X0 \in k9\_jordan6\ X0)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1))\Leftrightarrow(r1\_tarski\ X0\ X1) \tag{5}$$

Assume the following.

$$\forall X0.((v1\_topreal2\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))))\Rightarrow(r1\_tarski\ (k4\_jordan19\ X0)\ X0) \tag{6}$$

Assume the following.

$$\forall X0.((v1\_topreal2\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))))\Rightarrow(r1\_tarski\ (k3\_jordan19\ X0)\ X0) \tag{7}$$

Assume the following.

$$\forall X0.((v1\_topreal2\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))))\Rightarrow(k2\_jordan21\ X0\in k4\_jordan19\ X0) \tag{8}$$

Assume the following.

$$\forall X0.((v1\_topreal2\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))))\Rightarrow(k1\_jordan21\ X0\in k3\_jordan19\ X0) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1)\Rightarrow((v1\_xboole\_0\ X1)\vee(X0\in X1)) \tag{10}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))\Rightarrow((r1\_jordan6\ X0\ X1\ X2)\Leftrightarrow(\neg(\neg(X1\in k8\_jordan6\ X0)\wedge((X2\in k9\_jordan6\ X0)\wedge(X2\neq k18\_pscomp\_1\ X0)))\wedge((\neg(X1\in k8\_jordan6\ X0)\wedge((X2\in k8\_jordan6\ X0)\wedge(r1\_jordan5c\ (k8\_jordan6\ X0)\ (k18\_pscomp\_1\ X0)\ (k22\_pscomp\_1\ X0)\ X1\ X2)))\wedge(\neg(X1\in k9\_jordan6\ X0)\wedge((X2\in k9\_jordan6\ X0)\wedge((X2\neq k18\_pscomp\_1\ X0)\wedge(r1\_jordan5c\ (k9\_jordan6\ X0)\ (k22\_pscomp\_1\ X0)\ (k18\_pscomp\_1\ X0)\ X1\ X2)))))))))) \tag{11}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2))))\Rightarrow((v1\_topreal2\ X0)\Rightarrow((\neg v1\_xboole\_0\ X0)\wedge(v2\_compts\_1\ X0\ (k15\_euclid\ np\_\_2)))) \tag{12}$$

Theorem 1

$$\forall X0.((v1\_topreal2\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ np\_\_2)))))\Rightarrow(((k2\_jordan21\ X0\in k9\_jordan6\ X0)\wedge(k1\_jordan21\ X0\in k8\_jordan6\ X0))\vee((k1\_jordan21\ X0\in k9\_jordan6\ X0)\wedge(k2\_jordan21\ X0\in k8\_jordan6\ X0)))$$