t74_jordan2c (TMHQ7ZcyJSzGd88qTT3wwHejpHvsFz89ogy)

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 $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k15\_euclid : \iota \Rightarrow \iota$ be given. Let $k14\_euclid : \iota \Rightarrow \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_topmetr : \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k9\_metric\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1\_tarski\ X0\ X1) \wedge (r1\_tarski\ X2\ X1)) \Rightarrow (r1\_tarski\ (k2\_xboole\_0\ X0\ X2)\ X1) \tag{1}$$

Assume the following.

$$\forall X0.(m2\_subset\_1\ X0\ k1\_numbers\ k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ k1\_numbers) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k15\_euclid\ X0))) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ (k15\_euclid\ X0))) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ (k15\_euclid\ X0))) \Rightarrow (\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ (k14\_euclid\ X0))) \Rightarrow (\forall X6.((v1\_funct\_1\ X6) \wedge ((v1\_funct\_2\ X6\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ (k15\_euclid\ X0))) \wedge (m1\_subset\_1\ X6\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ (k15\_euclid\ X0)))))))) \Rightarrow (\neg(v5\_pre\_topc\ X6\ k5\_topmetr\ (k15\_euclid\ X0)) \wedge ((k1\_funct\_1\ X6\ k6\_numbers = X2) \wedge ((k1\_funct\_1\ X6\ np\_\_1 = X3) \wedge ((X4 \in k9\_metric\_1\ (k14\_euclid\ X0)\ X5\ X1) \wedge ((X3 \in k9\_metric\_1\ (k14\_euclid\ X0)\ X5\ X1) \wedge (\forall X7.((v1\_funct\_1\ X7) \wedge ((v1\_funct\_2\ X7\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ (k15\_euclid\ X0))) \wedge (m1\_subset\_1\ X7\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ (k15\_euclid\ X0)))))))) \Rightarrow (\neg(v5\_pre\_topc\ X7\ k5\_topmetr\ (k15\_euclid\ X0)) \wedge ((k1\_funct\_1\ X7\ k6\_numbers = X2) \wedge ((k1\_funct\_1\ X7\ np\_\_1 = X4) \wedge (r1\_tarski\ (k2\_relset\_1\ (u1\_struct\_0\ (k15\_euclid\ X0))\ X7)\ (k2\_xboole\_0\ (k2\_relset\_1\ (u1\_struct\_0\ (k15\_euclid\ X0))\ X6)\ (k9\_metric\_1\ (k14\_euclid\ X0)\ X5\ X1)))))))))))))))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1\_tarski\ X0\ X1)\wedge(r1\_tarski\ X1\ X2))\Rightarrow(r1\_tarski\ X0\ X2) \tag{3}$$

Theorem 1

$$\forall X0.(m2\_subset\_1\ X0\ k1\_numbers\ k5\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k1\_numbers)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ (k15\_euclid\ X0)))\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ (k15\_euclid\ X0)))\Rightarrow(\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ (k15\_euclid\ X0)))\Rightarrow(\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ (k14\_euclid\ X0)))\Rightarrow(\forall X6.(m1\_subset\_1\ X6\ (k1\_zfmisc\_1\ (u1\_struct\_0\ (k15\_euclid\ X0))))\Rightarrow(\forall X7.((v1\_funct\_1\ X7)\wedge((v1\_funct\_2\ X7\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ (k15\_euclid\ X0)))\wedge(m1\_subset\_1\ X7\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ (k15\_euclid\ X0)))))))\Rightarrow(\neg(v5\_pre\_topc\ X7\ k5\_topmetr\ (k15\_euclid\ X0))\wedge((r1\_tarski\ (k2\_relset\_1\ (u1\_struct\_0\ (k15\_euclid\ X0))\ X7)\ X6)\wedge((k1\_funct\_1\ X7\ k6\_numbers = X2)\wedge((k1\_funct\_1\ X7\ np\_\_1 = X3)\wedge((X4 \in k9\_metric\_1\ (k14\_euclid\ X0)\ X5\ X1)\wedge((X3 \in k9\_metric\_1\ (k14\_euclid\ X0)\ X5\ X1)\wedge((r1\_tarski\ (k9\_metric\_1\ (k14\_euclid\ X0)\ X5\ X1)\ X6)\wedge(\forall X8.((v1\_funct\_1\ X8)\wedge((v1\_funct\_2\ X8\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ (k15\_euclid\ X0)))\wedge(m1\_subset\_1\ X8\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ k5\_topmetr)\ (u1\_struct\_0\ (k15\_euclid\ X0)))))))\Rightarrow(\neg(v5\_pre\_topc\ X8\ k5\_topmetr\ (k15\_euclid\ X0))\wedge((r1\_tarski\ (k2\_relset\_1\ (u1\_struct\_0\ (k15\_euclid\ X0))\ X8)\ X6)\wedge((k1\_funct\_1\ X8\ k6\_numbers = X2)\wedge(k1\_funct\_1\ X8\ np\_\_1 = X4))))))))))))))))))))$$