l4_lp_space (TMWddCx-uvj1e4VpD4mcwz9oNF8LnfYCmxoZ)

October 27, 2020

Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_numbers : \iota$ be given. Let $k4\_power : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v2\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $v3\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $v1\_xcmplx\_0 : \iota \Rightarrow o$ be given. Let $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k3\_power : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $np\_\_0 : \iota$ be given. Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $v3\_membered : \iota \Rightarrow o$ be given. Let $k9\_prepower : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_int\_1 : \iota \Rightarrow o$ be given. Let $k4\_prepower : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $v1\_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xreal\_0\ X1) \Rightarrow ((r1\_xxreal\_0\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X0) \vee ((v2\_xxreal\_0\ X1) \vee (v3\_xxreal\_0\ X0))))) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0) \Rightarrow (X0 = k1\_xboole\_0) \tag{2}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xreal\_0\ X1) \Rightarrow ((r1\_xxreal\_0\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X1) \vee ((v3\_xxreal\_0\ X0) \vee (v2\_xxreal\_0\ X1))))) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xreal\_0\ X1) \Rightarrow (\neg (r1\_xxreal\_0\ X0\ X1) \wedge ((\neg v2\_xxreal\_0\ X1) \wedge (v2\_xxreal\_0\ X0)))) \tag{4}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xreal\_0\ X1) \Rightarrow (\neg (r1\_xxreal\_0\ X0\ X1) \wedge ((\neg v3\_xxreal\_0\ X0) \wedge (v3\_xxreal\_0\ X1)))) \tag{5}$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0)\Rightarrow(k3\_xcmplx\_0\ np\_\_1\ X0 = X0) \tag{6}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(\forall X1.(v1\_xreal\_0\ X1)\Rightarrow(\forall X2.\ (v1\_xreal\_0\ X2)\Rightarrow(\neg(\neg r1\_xxreal\_0\ X0\ k6\_numbers)\wedge((\neg r1\_xxreal\_0\ X1\ k6\_numbers)\wedge(k3\_power\ (k3\_xcmplx\_0\ X0\ X1)\ X2\neq k3\_xcmplx\_0\ (\ k3\_power\ X0\ X2)\ (k3\_power\ X1\ X2)))))) \tag{7}$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0)\Rightarrow(k3\_xcmplx\_0\ X0\ k6\_numbers = k6\_numbers) \tag{8}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_1)\wedge(m2\_subset\_1\ np\_\_1\ k1\_numbers\ k5\_numbers))\wedge((m1\_subset\_1\ np\_\_1\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_1\ k1\_numbers)) \tag{9}$$

Assume the following.

$$(m2\_subset\_1\ np\_\_0\ k1\_numbers\ k5\_numbers)\wedge((m1\_subset\_1\ np\_\_0\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_0\ k1\_numbers)) \tag{10}$$

Assume the following.

$$v1\_xboole\_0\ np\_\_0 \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(v1\_xreal\_0\ X1))\Rightarrow(k8\_real\_1\ X0\ X1 = k3\_xcmplx\_0\ X0\ X1) \tag{12}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(m1\_subset\_1\ X1\ k1\_numbers))\Rightarrow(k4\_power\ X0\ X1 = k3\_power\ X0\ X1) \tag{14}$$

Assume the following.

$$\exists X0.(v1\_xboole\_0\ X0)\wedge(v1\_xxreal\_0\ X0) \tag{15}$$

Assume the following.

$$\exists X0.(v1\_xboole\_0\ X0)\wedge((v1\_xcmplx\_0\ X0)\wedge((v1\_xxreal\_0\ X0)\wedge(v1\_xreal\_0\ X0))) \tag{16}$$

Assume the following.

$$\exists X0.(v1\_xcmplx\_0\ X0)\wedge((v1\_xxreal\_0\ X0)\wedge((v3\_xxreal\_0\ X0)\wedge(v1\_xreal\_0\ X0))) \tag{17}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0\ X0)\wedge(v1\_xreal\_0\ X1))\Rightarrow(v1\_xreal\_0\ (k3\_xcmplx\_0\ X0\ X1)) \tag{18}$$

Assume the following.

$$v3\_membered\ k1\_numbers \tag{19}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v3\_xxreal\_0\ X0)\wedge(v1\_xreal\_0\ X0))\wedge((\neg v3\_xxreal\_0\ X1)\wedge(v1\_xreal\_0\ X1)))\Rightarrow(\neg v3\_xxreal\_0\ (k3\_xcmplx\_0\ X0\ X1)) \tag{20}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_xxreal\_0\ X0)\wedge(v1\_xreal\_0\ X0))\wedge((\neg v2\_xxreal\_0\ X1)\wedge(v1\_xreal\_0\ X1)))\Rightarrow(\neg v3\_xxreal\_0\ (k3\_xcmplx\_0\ X0\ X1)) \tag{21}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_xxreal\_0\ X0)\wedge(v1\_xreal\_0\ X0))\wedge((\neg v3\_xxreal\_0\ X1)\wedge(v1\_xreal\_0\ X1)))\Rightarrow(\neg v2\_xxreal\_0\ (k3\_xcmplx\_0\ X1\ X0)) \tag{22}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(v1\_xreal\_0\ X1))\Rightarrow(m1\_subset\_1\ (k8\_real\_1\ X0\ X1)\ k1\_numbers) \tag{23}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(m1\_subset\_1\ X1\ k1\_numbers))\Rightarrow(m1\_subset\_1\ (k4\_power\ X0\ X1)\ k1\_numbers) \tag{24}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0\ X0)\wedge(v1\_xreal\_0\ X1))\Rightarrow(v1\_xreal\_0\ (k3\_power\ X0\ X1)) \tag{25}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(\forall X1.(v1\_xreal\_0\ X1)\Rightarrow(\forall X2.(v1\_xreal\_0\ X2)\Rightarrow(((\neg r1\_xxreal\_0\ X0\ k6\_numbers)\Rightarrow((X2 = k3\_power\ X0\ X1)\Leftrightarrow(X2 = k9\_prepower\ X0\ X1)))\wedge(((X0 = k6\_numbers)\Rightarrow((r1\_xxreal\_0\ X1\ k6\_numbers)\vee((X2 = k3\_power\ X0\ X1)\Leftrightarrow(X2 = k6\_numbers))))\wedge((v1\_int\_1\ X1)\Rightarrow((X2 = k3\_power\ X0\ X1)\Leftrightarrow(\exists X3.(v1\_int\_1\ X3)\wedge((X3 = X1)\wedge(X2 = k4\_prepower\ X0\ X3)))))))))) \tag{26}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(v1\_xreal\_0\ X1))\Rightarrow(k8\_real\_1\ X0\ X1 = k8\_real\_1\ X1\ X0) \tag{27}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0\ X0)\wedge(v1\_xcmplx\_0\ X1))\Rightarrow(k3\_xcmplx\_0\ X0\ X1 = k3\_xcmplx\_0\ X1\ X0) \tag{28}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(v7\_ordinal1\ X0) \tag{29}$$

Assume the following.

$$\forall X0.(v3\_membered\ X0)\Rightarrow(v1\_membered\ X0) \tag{30}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge((v1\_xxreal\_0\ X0)\wedge(\neg v3\_xxreal\_0\ X0)))\Rightarrow((v1\_xxreal\_0\ X0)\wedge(v2\_xxreal\_0\ X0)) \tag{31}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xxreal\_0\ X0) \tag{32}$$

Assume the following.

$$\forall X0.((v1\_xxreal\_0\ X0)\wedge(v2\_xxreal\_0\ X0))\Rightarrow((\neg v1\_xboole\_0\ X0)\wedge((v1\_xxreal\_0\ X0)\wedge(\neg v3\_xxreal\_0\ X0))) \tag{33}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xcmplx\_0\ X0) \tag{34}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(v1\_xreal\_0\ X0) \tag{35}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(v1\_xreal\_0\ X0) \tag{36}$$

Assume the following.

$$\forall X0.(v1\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow(v1\_xcmplx\_0\ X1)) \tag{37}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k1\_numbers)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ k1\_numbers)\Rightarrow(((r1\_xxreal\_0\ k6\_numbers\ X1)\wedge(r1\_xxreal\_0\ k6\_numbers\ X2))\Rightarrow((r1\_xxreal\_0\ X0\ k6\_numbers)\vee(k4\_power\ (k8\_real\_1\ X1\ X2)\ X0 = k8\_real\_1\ (k4\_power\ X1\ X0)\ (k4\_power\ X2\ X0))))))$$