t39_pepin (TMGiNcMeXjYCwVHSkhVhMdVKGCCos1bdoMa)

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Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np\_\_1 : \iota$ be given. Let $k4\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2\_int\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $v1\_int\_1 : \iota \Rightarrow o$ be given. Let $k6\_int\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2\_xxreal\_0 : \iota \Rightarrow o$ 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 $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np\_\_0 : \iota$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $k2\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0) \Rightarrow (X0 = k1\_xboole\_0) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_int\_1\ X0) \Rightarrow (\forall X1.(v1\_int\_1\ X1) \Rightarrow (\forall X2.\ (v1\_int\_1\ X2) \Rightarrow (((k6\_int\_1\ X1\ X0 = k6\_int\_1\ X2\ X0) \Rightarrow ((X0 = k6\_numbers) \vee (r2\_int\_1\ X1\ X2\ X0))) \wedge ((r2\_int\_1\ X1\ X2\ X0) \Rightarrow (k6\_int\_1\ X1\ X0 = k6\_int\_1\ X2\ X0))))) \tag{2}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (k4\_nat\_d\ X0\ X0 = k6\_numbers) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_int\_1\ X0) \Rightarrow (\forall X1.(v1\_int\_1\ X1) \Rightarrow (\forall X2.\ (v1\_int\_1\ X2) \Rightarrow ((r2\_int\_1\ X0\ X1\ X2) \Leftrightarrow (r2\_int\_1\ (k2\_xcmplx\_0\ X0\ X2)\ X1\ X2)))) \tag{4}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow ((\neg r1\_xxreal\_0\ X0\ np\_\_1) \Rightarrow (k4\_nat\_d\ np\_\_1\ X0 = np\_\_1)) \tag{5}$$

Assume the following.

$$\forall X0.(v1\_int\_1\ X0)\Rightarrow(\forall X1.(v1\_int\_1\ X1)\Rightarrow(\forall X2.\ (v1\_int\_1\ X2)\Rightarrow((r2\_int\_1\ X0\ X1\ X2)\Rightarrow(r2\_int\_1\ X1\ X0\ X2)))) \tag{6}$$

Assume the following.

$$\forall X0.(v1\_int\_1\ X0)\Rightarrow(\forall X1.(v1\_int\_1\ X1)\Rightarrow(r2\_int\_1\ X0\ X1\ np\_\_1)) \tag{7}$$

Assume the following.

$$\forall X0.(v1\_int\_1\ X0)\Rightarrow(\forall X1.(v1\_int\_1\ X1)\Rightarrow(r2\_int\_1\ X0\ X0\ X1)) \tag{8}$$

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.

$$v1\_xboole\_0\ np\_\_0 \tag{10}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{11}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0)\wedge(v7\_ordinal1\ X1))\Rightarrow(k4\_nat\_d\ X0\ X1 = k6\_int\_1\ X0\ X1) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0)\wedge(v7\_ordinal1\ X1))\Rightarrow(k2\_nat\_d\ X0\ X1 = k6\_int\_1\ X0\ X1) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0)\wedge(v7\_ordinal1\ X1))\Rightarrow(v7\_ordinal1\ (k2\_xcmplx\_0\ X0\ X1)) \tag{15}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(v7\_ordinal1\ X1)\Rightarrow(\forall X2.\ (v7\_ordinal1\ X2)\Rightarrow((X2 = k2\_nat\_d\ X0\ X1)\Leftrightarrow(\neg(\forall X3.(v7\_ordinal1\ X3)\Rightarrow(\neg(X0 = k2\_xcmplx\_0\ (k3\_xcmplx\_0\ X1\ X3)\ X2)\wedge(\neg r1\_xxreal\_0\ X1\ X2)))\wedge(\neg(X2 = k6\_numbers)\wedge(X1 = k6\_numbers)))))) \tag{16}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0\ X0)\wedge(v1\_xxreal\_0\ X1))\Rightarrow(\\(r1\_xxreal\_0\ X0\ X1)\vee(r1\_xxreal\_0\ X1\ X0)) \tag{17}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \tag{18}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(v1\_xxreal\_0\ X0) \tag{19}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(v1\_int\_1\ X0) \tag{20}$$

Theorem 1

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(v7\_ordinal1\ X1)\Rightarrow((\\\neg r1\_xxreal\_0\ X1\ np\_\_1)\Rightarrow((k4\_nat\_d\ X0\ X1 = np\_\_1)\Leftrightarrow(r2\_int\_1\ X0\ np\_\_1\\X1))))$$