l108_xreal_1 (TMVxW2TXjmJ6a9YYk5x1s69wsdyADeF887u)

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Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_numbers : \iota$ be given. Let $k5\_xcmplx\_0 : \iota \Rightarrow \iota$ be given. Let $v3\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $v2\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $v1\_xcmplx\_0 : \iota \Rightarrow o$ be given. Let $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0) \Rightarrow (\forall X1.(v1\_xcmplx\_0\ X1) \Rightarrow ((X0 \neq k6\_numbers) \Rightarrow (k3\_xcmplx\_0\ (k7\_xcmplx\_0\ X1\ X0)\ X0 = X1))) \tag{2}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xreal\_0\ X1) \Rightarrow (\neg(r1\_xxreal\_0\ X0\ X1) \wedge ((\neg v3\_xxreal\_0\ X0) \wedge (v3\_xxreal\_0\ X1)))) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0) \Rightarrow (k3\_xcmplx\_0\ np\_\_1\ X0 = X0) \tag{4}$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0) \Rightarrow (k3\_xcmplx\_0\ X0\ k6\_numbers = k6\_numbers) \tag{5}$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0) \Rightarrow (k7\_xcmplx\_0\ np\_\_1\ X0 = k5\_xcmplx\_0\ X0) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0\ X0) \wedge (v1\_xcmplx\_0\ X1)) \Rightarrow (k3\_xcmplx\_0\ X0\ (k5\_xcmplx\_0\ X1) = k7\_xcmplx\_0\ X0\ X1) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0\ X0)\wedge(v1\_xcmplx\_0\ X1))\Rightarrow(k7\_xcmplx\_0\ (k5\_xcmplx\_0\ X0)\ (k5\_xcmplx\_0\ X1) = k7\_xcmplx\_0\ X1\ X0) \tag{8}$$

Assume the following.

$$\exists X0.(v1\_xboole\_0\ X0)\wedge((v1\_xcmplx\_0\ X0)\wedge((v1\_xxreal\_0\ X0)\wedge(v1\_xreal\_0\ X0))) \tag{9}$$

Assume the following.

$$\exists X0.(v1\_xcmplx\_0\ X0)\wedge((v1\_xxreal\_0\ X0)\wedge((v3\_xxreal\_0\ X0)\wedge(v1\_xreal\_0\ X0))) \tag{10}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(\forall X1.(v1\_xreal\_0\ X1)\Rightarrow(\forall X2.(v1\_xreal\_0\ X2)\Rightarrow(\neg(\neg r1\_xxreal\_0\ k6\_numbers\ X0)\wedge((\neg r1\_xxreal\_0\ X2\ X1)\wedge(r1\_xxreal\_0\ (k3\_xcmplx\_0\ X1\ X0)\ (k3\_xcmplx\_0\ X2\ X0))))))) \tag{11}$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0)\Rightarrow(k5\_xcmplx\_0\ (k5\_xcmplx\_0\ X0) = X0) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v1\_xboole\_0\ X0)\wedge(v1\_xcmplx\_0\ X0))\wedge((\neg v1\_xboole\_0\ X1)\wedge(v1\_xcmplx\_0\ X1)))\Rightarrow(\neg v1\_xboole\_0\ (k3\_xcmplx\_0\ X0\ X1)) \tag{13}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0)\wedge(v1\_xcmplx\_0\ X0))\Rightarrow((\neg v1\_xboole\_0\ (k5\_xcmplx\_0\ X0))\wedge(v1\_xcmplx\_0\ (k5\_xcmplx\_0\ X0))) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0\ X0)\wedge(v1\_xreal\_0\ X1))\Rightarrow(v1\_xreal\_0\ (k3\_xcmplx\_0\ X0\ X1)) \tag{15}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow((v1\_xcmplx\_0\ (k5\_xcmplx\_0\ X0))\wedge(v1\_xreal\_0\ (k5\_xcmplx\_0\ X0))) \tag{16}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0\ X0)\wedge(v1\_xcmplx\_0\ X1))\Rightarrow(v1\_xcmplx\_0\ (k3\_xcmplx\_0\ X0\ X1)) \tag{17}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_xxreal\_0\ X0)\wedge(v1\_xreal\_0\ X0))\wedge((\neg v2\_xxreal\_0\ X1)\wedge(v1\_xreal\_0\ X1)))\Rightarrow(\neg v3\_xxreal\_0\ (k7\_xcmplx\_0\ X0\ X1)) \tag{18}$$

Assume the following.

$$\forall X0.((\neg v3\_xxreal\_0\ X0)\wedge(v1\_xreal\_0\ X0))\Rightarrow((v1\_xcmplx\_0\ (k5\_xcmplx\_0\ X0))\wedge(\neg v3\_xxreal\_0\ (k5\_xcmplx\_0\ X0))) \tag{19}$$

Assume the following.

$$\forall X0.((v3\_xxreal\_0\ X0)\wedge(v1\_xreal\_0\ X0))\Rightarrow((v1\_xcmplx\_0\ (k5\_xcmplx\_0\ X0))\wedge(v3\_xxreal\_0\ (k5\_xcmplx\_0\ X0))) \tag{20}$$

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.

$$\forall X0.(v1\_xcmplx\_0\ X0)\Rightarrow(v1\_xcmplx\_0\ (k5\_xcmplx\_0\ X0)) \tag{23}$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0)\Rightarrow(\forall X1.(v1\_xcmplx\_0\ X1)\Rightarrow((X0\neq k6\_numbers)\Rightarrow((X1 = k5\_xcmplx\_0\ X0)\Leftrightarrow(k3\_xcmplx\_0\ X0\ X1 = np\_\_1)))\wedge((X0 = k6\_numbers)\Rightarrow((X1 = k5\_xcmplx\_0\ X0)\Leftrightarrow(X1 = k6\_numbers))))) \tag{24}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0\ X0)\wedge(v1\_xxreal\_0\ X1))\Rightarrow((r1\_xxreal\_0\ X0\ X1)\vee(r1\_xxreal\_0\ X1\ X0)) \tag{25}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0\ X0)\wedge(v1\_xcmplx\_0\ X1))\Rightarrow(k3\_xcmplx\_0\ X0\ X1 = k3\_xcmplx\_0\ X1\ X0) \tag{26}$$

Assume the following.

$$\forall X0.((v1\_xboole\_0\ X0)\wedge(v1\_xxreal\_0\ X0))\Rightarrow((v1\_xxreal\_0\ X0)\wedge((\neg v2\_xxreal\_0\ X0)\wedge(\neg v3\_xxreal\_0\ X0))) \tag{27}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xxreal\_0\ X0) \tag{28}$$

Assume the following.

$$\forall X0.((v1\_xxreal\_0\ X0)\wedge(v2\_xxreal\_0\ X0))\Rightarrow((\neg v1\_xboole\_0\ X0)\wedge((v1\_xxreal\_0\ X0)\wedge(\neg v3\_xxreal\_0\ X0))) \tag{29}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xcmplx\_0\ X0) \tag{30}$$

Theorem 1

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(\forall X1.(v1\_xreal\_0\ X1)\Rightarrow(\neg(\neg r1\_xxreal\_0\ k6\_numbers\ X0)\wedge((\neg r1\_xxreal\_0\ X0\ X1)\wedge(r1\_xxreal\_0\ (k5\_xcmplx\_0\ X1)\ (k5\_xcmplx\_0\ X0))))))$$