l4_series_5 (TMYE6g8pWN6NGWrJMexh9BTAi5Q8CWmA9nv)

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Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $v2\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $k3\_power : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13\_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_xcmplx\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_xcmplx\_0 : \iota \Rightarrow o$ be given. Let $k7\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v3\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $k10\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0) \Rightarrow (\forall X1.(v1\_xcmplx\_0\ X1) \Rightarrow (\forall X2.\ (v1\_xcmplx\_0\ X2) \Rightarrow (k7\_xcmplx\_0\ X0\ (k7\_xcmplx\_0\ X1\ X2) = k3\_xcmplx\_0\ (k7\_xcmplx\_0\ X2\ X1)\ X0))) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xreal\_0\ X1) \Rightarrow ((r1\_xxreal\_0\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X0) \vee ((v2\_xxreal\_0\ X1) \vee (v3\_xxreal\_0\ X0))))) \tag{2}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0) \Rightarrow (X0 = k1\_xboole\_0) \tag{3}$$

Assume the following.

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

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xreal\_0\ X1) \Rightarrow ((\neg r1\_xxreal\_0\ X0\ k6\_numbers) \Rightarrow (k3\_power\ (k10\_real\_1\ np\_\_1\ X0)\ X1 = k3\_power\ X0\ (k4\_xcmplx\_0\ X1)))) \tag{5}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_1)\wedge(m2\_subset\_1\ np\_\_1\ k1\_numbers\ k5\_numbers))\wedge((m1\_subset\_1\ np\_\_1\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_1\ k1\_numbers)) \tag{6}$$

Assume the following.

$$(m2\_subset\_1\ np\_\_0\ k1\_numbers\ k5\_numbers)\wedge((m1\_subset\_1\ np\_\_0\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_0\ k1\_numbers)) \tag{7}$$

Assume the following.

$$v1\_xboole\_0\ np\_\_0 \tag{8}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0\ X0)\wedge(v1\_xcmplx\_0\ X1))\Rightarrow(k13\_complex1\ X0\ X1 = k7\_xcmplx\_0\ X0\ X1) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(v1\_xreal\_0\ X1))\Rightarrow(k10\_real\_1\ X0\ X1 = k7\_xcmplx\_0\ X0\ X1) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v1\_xboole\_0\ X0)\wedge(v1\_xcmplx\_0\ X0))\wedge((\neg v1\_xboole\_0\ X1)\wedge(v1\_xcmplx\_0\ X1)))\Rightarrow(\neg v1\_xboole\_0\ (k7\_xcmplx\_0\ X0\ X1)) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0\ X0)\wedge(v1\_xreal\_0\ X1))\Rightarrow(v1\_xreal\_0\ (k7\_xcmplx\_0\ X0\ X1)) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0\ X0)\wedge(v1\_xcmplx\_0\ X1))\Rightarrow(v1\_xcmplx\_0\ (k7\_xcmplx\_0\ X0\ X1)) \tag{14}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v3\_xxreal\_0\ X0)\wedge(v1\_xreal\_0\ X0))\wedge((\neg v3\_xxreal\_0\ X1)\wedge(v1\_xreal\_0\ X1)))\Rightarrow(\neg v3\_xxreal\_0\ (k7\_xcmplx\_0\ X0\ X1)) \tag{15}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0\ X0)\wedge(v1\_xcmplx\_0\ X1))\Rightarrow(k3\_xcmplx\_0\ X0\ X1 = k3\_xcmplx\_0\ X1\ X0) \tag{16}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xxreal\_0\ X0) \tag{17}$$

Assume the following.

$$\forall X0.((v1\_xxreal\_0\ X0)\wedge(v2\_xxreal\_0\ X0))\Rightarrow((\neg v1\_xboole\_0\ X0)\wedge((v1\_xxreal\_0\ X0)\wedge(\neg v3\_xxreal\_0\ X0))) \tag{18}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xcmplx\_0\ X0) \tag{19}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(v1\_xreal\_0\ X0) \tag{20}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(v1\_xcmplx\_0\ X0) \tag{21}$$

Theorem 1

$$\forall X0.((v1\_xreal\_0\ X0)\wedge(v2\_xxreal\_0\ X0))\Rightarrow(\forall X1.((v1\_xreal\_0\ X1)\wedge(v2\_xxreal\_0\ X1))\Rightarrow(\forall X2.(v1\_xreal\_0\ X2)\Rightarrow(k3\_power\ (k13\_complex1\ X0\ X1)\ (k4\_xcmplx\_0\ X2) = k3\_power\ (k13\_complex1\ X1\ X0)\ X2)))$$