l9_int_2 (TMK12PFaFF8Y8kdVBVGRPETaFiRYFeUUe4Q)

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Let $v1\_int\_1 : \iota \Rightarrow o$ be given. Let $r1\_int\_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_int\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k4\_xcmplx\_0 : \iota \Rightarrow \iota$ be given. Let $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xcmplx\_0 : \iota \Rightarrow o$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1\_int\_1\ X0) \Rightarrow (\forall X1.(v1\_int\_1\ X1) \Rightarrow ((X0 \neq k6\_numbers) \Rightarrow (X1 = k2\_xcmplx\_0\ (k3\_xcmplx\_0\ (k5\_int\_1\ X1\ X0)\ X0)\ (k6\_int\_1\ X1\ X0)))) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_int\_1\ X0) \Rightarrow (\forall X1.(v1\_int\_1\ X1) \Rightarrow (\forall X2.(v1\_int\_1\ X2) \Rightarrow ((r1\_int\_1\ X0\ X1) \Rightarrow (r1\_int\_1\ X0\ (k3\_xcmplx\_0\ X1\ X2))))) \tag{2}$$

Assume the following.

$$\forall X0.(v1\_int\_1\ X0) \Rightarrow (\forall X1.(v1\_int\_1\ X1) \Rightarrow (\forall X2.(v1\_int\_1\ X2) \Rightarrow (((r1\_int\_1\ X0\ X1) \wedge (r1\_int\_1\ X0\ (k2\_xcmplx\_0\ X1\ X2))) \Rightarrow (r1\_int\_1\ X0\ X2)))) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_int\_1\ X0) \Rightarrow ((r1\_int\_1\ X0\ k6\_numbers) \wedge ((r1\_int\_1\ np\_\_1\ X0) \wedge (r1\_int\_1\ (k4\_xcmplx\_0\ np\_\_1)\ X0))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_int\_1\ X0) \wedge (v1\_int\_1\ X1)) \Rightarrow (v1\_int\_1\ (k3\_xcmplx\_0\ X0\ X1)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_int\_1\ X0) \wedge (v1\_int\_1\ X1)) \Rightarrow (v1\_int\_1\ (k6\_int\_1\ X0\ X1)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_int\_1\ X0)\wedge(v1\_int\_1\ X1))\Rightarrow(v1\_int\_1\ (k5\_int\_1\ X0\ X1)) \tag{7}$$

Assume the following.

$$\forall X0.(v1\_int\_1\ X0)\Rightarrow(\forall X1.(v1\_int\_1\ X1)\Rightarrow(((X1\neq k6\_numbers)\Rightarrow (k6\_int\_1\ X0\ X1 = k6\_xcmplx\_0\ X0\ (k3\_xcmplx\_0\ (k5\_int\_1\ X0\ X1)\ X1)))\wedge ((X1 = k6\_numbers)\Rightarrow(k6\_int\_1\ X0\ X1 = k6\_numbers)))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0\ X0)\wedge(v1\_xcmplx\_0\ X1))\Rightarrow(k3\_xcmplx\_0\ X0\ X1 = k3\_xcmplx\_0\ X1\ X0) \tag{9}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xcmplx\_0\ X0) \tag{10}$$

Assume the following.

$$\forall X0.(v1\_int\_1\ X0)\Rightarrow(v1\_xreal\_0\ X0) \tag{11}$$

Theorem 1

$$\forall X0.(v1\_int\_1\ X0)\Rightarrow(\forall X1.(v1\_int\_1\ X1)\Rightarrow(\forall X2. (v1\_int\_1\ X2)\Rightarrow(((r1\_int\_1\ X0\ X1)\wedge(r1\_int\_1\ X0\ X2))\Rightarrow(r1\_int\_1 X0\ (k6\_int\_1\ X1\ X2)))))$$