

l57_wsierp_1 (TMNmvGiyvurigSqG- WZpkd3D4XgUXnYNZD47)

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Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $k6_int_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $r2_int_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_int_1 X0) \Rightarrow (\forall X1.(v1_int_1 X1) \Rightarrow (\forall X2. \\ & (v1_int_1 X2) \Rightarrow (((k6_int_1 X1 X0 = k6_int_1 X2 X0) \Rightarrow ((X0 = k6_numbers) \vee \\ & (r2_int_1 X1 X2 X0))) \wedge ((r2_int_1 X1 X2 X0) \Rightarrow (k6_int_1 X1 X0 = k6_int_1 \\ & X2 X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(v1_int_1 X0) \Rightarrow (k6_int_1 X0 X0 = k6_numbers) \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_int_1 X0) \Rightarrow (\forall X1.(v1_int_1 X1) \Rightarrow (\forall X2. \\ & (v1_int_1 X2) \Rightarrow ((r2_int_1 X0 X1 X2) \Leftrightarrow (r2_int_1 (k2_xcmplx_0 X0 X2) \\ & X1 X2)))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_int_1 X0) \Rightarrow (\forall X1.(v1_int_1 X1) \Rightarrow (\forall X2. \\ & (v1_int_1 X2) \Rightarrow (\forall X3.(v1_int_1 X3) \Rightarrow ((r2_int_1 (k2_xcmplx_0 \\ & X0 X1) X2 X3) \Leftrightarrow (r2_int_1 X0 (k6_xcmplx_0 X2 X1) X3)))))) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1_int_1 X0) \wedge (v1_int_1 X1)) \Rightarrow (v1_int_1 (k6_xcmplx_0 X0 X1)) \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_int_1 X0) \Rightarrow (\forall X1.(v1_int_1 X1) \Rightarrow (((X1 \neq k6_numbers) \Rightarrow \\ & (k6_int_1 X0 X1 = k6_xcmplx_0 X0 (k3_xcmplx_0 (k5_int_1 X0 X1) X1))) \wedge \\ & ((X1 = k6_numbers) \Rightarrow (k6_int_1 X0 X1 = k6_numbers)))) \end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k2_xcmplx_0 X0 X1 = k2_xcmplx_0 X1 X0) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0)\Rightarrow(v1_xcmplx_0 X0) \quad (8)$$

Assume the following.

$$\forall X0.(v1_int_1 X0)\Rightarrow(v1_xreal_0 X0) \quad (9)$$

Theorem 1

$$\forall X0.(v1_int_1 X0)\Rightarrow(\forall X1.(v1_int_1 X1)\Rightarrow(\forall X2.(v1_int_1 X2)\Rightarrow((k6_int_1 X0 X1 = k6_int_1 X2 X1)\Rightarrow(k6_int_1 (k6_xcmplx_0 X0 X2) X1 = k6_numbers))))$$