

l19_cfdiff_2

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k4_real_ns1 : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_normsp_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_complex1 : \iota \Rightarrow \iota$ be given. Let $k7_complex1 : \iota$ be given. Let $k1_xcmplx_0 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k5_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17_complex1 : \iota \Rightarrow \iota$ be given. Let $v1_membered : \iota \Rightarrow o$ be given. Let $k2_numbers : \iota$ be given. Assume the following.

$$k7_complex1 = k1_xcmplx_0 \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (k5_binop_2 X0 X1 = k3_xcmplx_0 X0 X1) \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0. (m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1. (m1_subset_1 \\ X1 k1_numbers) \Rightarrow (\forall X2. (v1_xcmplx_0 X2) \Rightarrow ((X2 = k3_binop_2 \\ X0 (k5_binop_2 X1 k7_complex1)) \Rightarrow (r1_xxreal_0 (k17_complex1 X2) \\ (k7_real_1 (k18_complex1 X0) (k18_complex1 X1)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0. (m1_subset_1 X0 k1_numbers) \Rightarrow (\forall X1. (m1_subset_1 \\ X1 k1_numbers) \Rightarrow (\forall X2. (v1_xcmplx_0 X2) \Rightarrow (\forall X3. (m1_subset_1 \\ X3 (u1_struct_0 (k4_real_ns1 np_2)))) \Rightarrow (((X2 = k3_binop_2 X0 (k5_binop_2 \\ X1 k7_complex1)) \wedge (X3 = k10_finseq_1 X0 X1)) \Rightarrow (k17_complex1 X2 = \\ k1_normsp_0 (k4_real_ns1 np_2) X3)))))) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (v1_xcmplx_0 (k3_xcmplx_0 X0 X1)) \tag{5}$$

Assume the following.

$$v1_xcmplx_0 \ k1_xcmplx_0 \tag{6}$$

Assume the following.

$$v1_membered \ k2_numbers \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 \ X0)\wedge(v1_xcmplx_0 \ X1))\Rightarrow(m1_subset_1 \ (k3_binop_2 \ X0 \ X1) \ k2_numbers) \tag{8}$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k1_numbers)\Rightarrow(v1_xcmplx_0 \ X0) \tag{9}$$

Assume the following.

$$\forall X0.(v1_membered \ X0)\Rightarrow(\forall X1.(m1_subset_1 \ X1 \ X0)\Rightarrow(v1_xcmplx_0 \ X1)) \tag{10}$$

Theorem 1

$$\forall X0.(m1_subset_1 \ X0 \ k1_numbers)\Rightarrow(\forall X1.(m1_subset_1 \ X1 \ k1_numbers)\Rightarrow(\forall X2.(m1_subset_1 \ X2 \ (u1_struct_0 \ (k4_real_ns1 \ np_2)))\Rightarrow((X2 = k10_finseq_1 \ X0 \ X1)\Rightarrow(r1_xreal_0 \ (k1_normsp_0 \ (k4_real_ns1 \ np_2) \ X2) \ (k7_real_1 \ (k18_complex1 \ X0) \ (k18_complex1 \ X1))))))$$