

117_cfdiff_2 (TMRTD- hWohfvwwyxWKXxDsYn8qJpf5iCnW3t)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_complex1 : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k17_complex1 : \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_complex1 : \iota \Rightarrow \iota$ be given. Let $k2_numbers : \iota$ be given. Let $k3_complex1 : \iota \Rightarrow \iota$ be given. Let $k4_complex1 : \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(m1_subset_1 X0 k2_numbers) \Rightarrow (r1_xxreal_0 (k17_complex1 X0) (k7_real_1 (k18_complex1 (k3_complex1 X0)) (k18_complex1 (k4_complex1 X0)))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((k3_complex1 (k2_xcmplx_0 X0 (k3_xcmplx_0 X1 k7_complex1)) = X0) \wedge (k4_complex1 (k2_xcmplx_0 X0 (k3_xcmplx_0 X1 k7_complex1)) = X1))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (k5_binop_2 X0 X1 = k3_xcmplx_0 X0 X1) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (k3_binop_2 X0 X1 = k2_xcmplx_0 X0 X1) \quad (4)$$

Assume the following.

$$m1_subset_1 k7_complex1 k2_numbers \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (m1_subset_1 (k5_binop_2 X0 X1) k2_numbers) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(m1_subset_1 (k3_binop_2 X0 X1) k2_numbers) \quad (7)$$

Assume the following.

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

Assume the following.

$$\forall X0.(m1_subset_1 X0 k2_numbers)\Rightarrow(v1_xcmplx_0 X0) \quad (9)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xreal_0 X0) \quad (10)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(v1_xcmplx_0 X0) \quad (11)$$

Theorem 1

$$\forall X0.(m1_subset_1 X0 k1_numbers)\Rightarrow(\forall X1.(m1_subset_1 X1 k1_numbers)\Rightarrow(\forall X2.(v1_xcmplx_0 X2)\Rightarrow((X2 = k3_binop_2 X0 (k5_binop_2 X1 k7_complex1))\Rightarrow(r1_xreal_0 (k17_complex1 X2) (k7_real_1 (k18_complex1 X0) (k18_complex1 X1))))))$$