

t10_int_1

(TMG5jhKkTAaBrZ9QnTc25bsU5jasZijScCp)

October 27, 2020

Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ 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 $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v1_int_1 X0) \Rightarrow (\forall X1.(v1_int_1 X1) \Rightarrow ((k3_xcmplx_0 \\ X0 X1 = np_1) \Leftrightarrow (((X0 = np_1) \wedge (X1 = np_1)) \vee ((X0 = k1_real_1 np_1) \wedge \\ (X1 = k1_real_1 np_1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 np_1 X0 = X0) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((v1_xcmplx_0 X0) \wedge ((v1_xcmplx_0 \\ X1) \wedge (v1_xcmplx_0 X2))) \Rightarrow (k3_xcmplx_0 (k3_xcmplx_0 X0 X1) X2 = k3_xcmplx_0 \\ X0 (k3_xcmplx_0 X1 X2)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 X0 (k4_xcmplx_0 np_1) = k4_xcmplx_0 X0) \quad (4)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0 np_1) \wedge (m2_subset_1 np_1 k1_numbers k5_numbers)) \wedge \\ ((m1_subset_1 np_1 k5_numbers) \wedge (m1_subset_1 np_1 k1_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$k4_xcmplx_0 (k4_xcmplx_0 np_1) = np_1 \quad (6)$$

Assume the following.

$$k3_xcmplx_0 \ np_1 \ np_1 = np_1 \quad (7)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (k1_real_1 \ X0 = k4_xcmplx_0 \ X0) \quad (8)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 \ X0) \Rightarrow (k4_xcmplx_0 \ (k4_xcmplx_0 \ X0) = X0) \quad (9)$$

Assume the following.

$$\forall X0.(v1_int_1 \ X0) \Rightarrow ((v1_xcmplx_0 \ (k4_xcmplx_0 \ X0)) \wedge (v1_int_1 \ (k4_xcmplx_0 \ X0))) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1_int_1 \ X0) \wedge (v1_int_1 \ X1)) \Rightarrow (v1_int_1 \ (k3_xcmplx_0 \ X0 \ X1)) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 \ X0) \wedge (v1_xcmplx_0 \ X1)) \Rightarrow (k3_xcmplx_0 \ X0 \ X1 = k3_xcmplx_0 \ X1 \ X0) \quad (12)$$

Assume the following.

$$\forall X0.(v1_xreal_0 \ X0) \Rightarrow (v1_xcmplx_0 \ X0) \quad (13)$$

Assume the following.

$$\forall X0.(v1_int_1 \ X0) \Rightarrow (v1_xreal_0 \ X0) \quad (14)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_int_1 \ X0) \Rightarrow (\forall X1.(v1_int_1 \ X1) \Rightarrow ((k3_xcmplx_0 \\ & X0 \ X1 = k1_real_1 \ np_1) \Leftrightarrow (((X0 = k1_real_1 \ np_1) \wedge (X1 = np_1)) \vee \\ & ((X0 = np_1) \wedge (X1 = k1_real_1 \ np_1)))) \end{aligned}$$