

l126_quaterni (TMFbMypmuL- vhzS7oSVQaY55UJTaKNpUUfjv)

October 27, 2020

Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_square_1 : \iota \Rightarrow \iota$ be given. Let $k7_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_0 : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k3_square_1 : \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (\forall X3.(v1_xreal_0 X3) \Rightarrow (((r1_xxreal_0 \\ & X0 X1) \wedge (r1_xxreal_0 X2 X3)) \Rightarrow (r1_xxreal_0 (k2_xcmplx_0 X0 X2) (\\ & k2_xcmplx_0 X1 X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\neg(\neg r1_xxreal_0 X0 X1) \wedge ((\neg v2_xxreal_0 X0) \wedge (\neg v3_xxreal_0 X1)))) \tag{2}$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \tag{3}$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 k6_numbers X0) \Rightarrow (r1_xxreal_0 X1 (k2_xcmplx_0 X0 X1)))) \tag{4}$$

Assume the following.

$$(m2_subset_1 np_0 k1_numbers k5_numbers) \wedge ((m1_subset_1 np_0 k5_numbers) \wedge (m1_subset_1 np_0 k1_numbers)) \tag{5}$$

Assume the following.

$$v1_xboole_0 \text{ np_}0 \quad (6)$$

Assume the following.

$$k2_xcmplx_0 \text{ np_}0 \text{ np_}0 = \text{np_}0 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 \text{ X0 } k1_numbers) \wedge (v1_xreal_0 \text{ X1})) \Rightarrow (k7_real_1 \text{ X0 } \text{X1} = k2_xcmplx_0 \text{ X0 } \text{X1}) \quad (8)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (9)$$

Assume the following.

$$\forall X0.(m1_subset_1 \text{ X0 } k1_numbers) \Rightarrow (k5_square_1 \text{ X0} = k3_square_1 \text{ X0}) \quad (10)$$

Assume the following.

$$v3_membered \text{ k1_numbers} \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v3_xxreal_0 \text{ X0}) \wedge (v1_xreal_0 \text{ X0})) \wedge ((\neg v3_xxreal_0 \text{ X1}) \wedge (v1_xreal_0 \text{ X1}))) \Rightarrow (\neg v3_xxreal_0 (k3_xcmplx_0 \text{ X0 } \text{X1})) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2_xxreal_0 \text{ X0}) \wedge (v1_xreal_0 \text{ X0})) \wedge ((\neg v2_xxreal_0 \text{ X1}) \wedge (v1_xreal_0 \text{ X1}))) \Rightarrow (\neg v3_xxreal_0 (k3_xcmplx_0 \text{ X0 } \text{X1})) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 \text{ X0 } k1_numbers) \wedge (v1_xreal_0 \text{ X1})) \Rightarrow (m1_subset_1 (k7_real_1 \text{ X0 } \text{X1}) \text{ k1_numbers}) \quad (14)$$

Assume the following.

$$\forall X0.(m1_subset_1 \text{ X0 } k1_numbers) \Rightarrow (m1_subset_1 (k5_square_1 \text{ X0}) \text{ k1_numbers}) \quad (15)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 \text{ X0}) \Rightarrow (k3_square_1 \text{ X0} = k3_xcmplx_0 \text{ X0 } \text{X0}) \quad (16)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(v2_membered\ X0) \quad (17)$$

Assume the following.

$$\forall X0.((v1_xreal_0\ X0)\wedge(v2_xreal_0\ X0))\Rightarrow((\neg v1_xboole_0\ X0)\wedge((v1_xreal_0\ X0)\wedge(\neg v3_xreal_0\ X0))) \quad (18)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0)\Rightarrow(v1_xcmplx_0\ X0) \quad (19)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(v1_xreal_0\ X0) \quad (20)$$

Assume the following.

$$\forall X0.(v2_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v1_xreal_0\ X1)) \quad (21)$$

Theorem 1

$$\forall X0.(m1_subset_1\ X0\ k1_numbers)\Rightarrow(\forall X1.(m1_subset_1\ X1\ k1_numbers)\Rightarrow(\forall X2.(m1_subset_1\ X2\ k1_numbers)\Rightarrow(\forall X3.(m1_subset_1\ X3\ k1_numbers)\Rightarrow(r1_xreal_0\ (k5_square_1\ X0)\ (k7_real_1\ (k7_real_1\ (k7_real_1\ (k5_square_1\ X1)\ (k5_square_1\ X2))\ (k5_square_1\ X3))\ (k5_square_1\ X0))))))$$