

165_xreal_1 (TMGqjX-
AzNCBfHy97mFh9MZ32Q3yfYQKHCCQ)

October 27, 2020

Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_0 : \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $c5_xreal_0 : \iota$ be given. Let $k1_arytm_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $c3_xreal_0 : \iota$ be given. Let $c7_xreal_0 : \iota$ be given. Let $k1_xxreal_0 : \iota$ be given. Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Leftrightarrow (r1_xxreal_0 (k4_xcmplx_0 X1) (k4_xcmplx_0 X0)))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_xcmplx_0 X0) \wedge ((v1_xcmplx_0 X1) \wedge (v1_xcmplx_0 X2))) \Rightarrow (k3_xcmplx_0 (k3_xcmplx_0 X0 X1) X2 = k3_xcmplx_0 X0 (k3_xcmplx_0 X1 X2)) \quad (3)$$

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.

$$(m2_subset_1 np_0 k1_numbers k5_numbers) \wedge ((m1_subset_1 np_0 k5_numbers) \wedge (m1_subset_1 np_0 k1_numbers)) \quad (5)$$

Assume the following.

$$k4_xcmplx_0 np_0 = np_0 \quad (6)$$

Assume the following.

$$k2_xcmplx_0 \text{ np_1} (k4_xcmplx_0 \text{ np_1}) = \text{np_0} \quad (7)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ (v1_xreal_0 X2) \Rightarrow (\neg(\neg r1_xxreal_0 X0 \ k6_numbers) \wedge ((\neg r1_xxreal_0 \\ X2 \ X1) \wedge (r1_xxreal_0 (k3_xcmplx_0 X2 \ X0) (k3_xcmplx_0 X1 \ X0)))))) \end{aligned} \quad (9)$$

Assume the following.

$$(c5_xreal_0 = k4_xcmplx_0 \text{ np_1}) \wedge (k1_arytm_0 \ c3_xreal_0 \ c5_xreal_0 = k6_numbers) \quad (10)$$

Assume the following.

$$k2_xcmplx_0 \text{ np_1} (k4_xcmplx_0 \text{ np_1}) = k6_numbers \quad (11)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k4_xcmplx_0 (k4_xcmplx_0 X0) = X0) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow (v1_xreal_0 (k3_xcmplx_0 X0 \ X1)) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0) \wedge (v1_xcmplx_0 X1)) \Rightarrow (v1_xcmplx_0 (k3_xcmplx_0 X0 \ X1)) \quad (14)$$

Assume the following.

$$m1_subset_1 \ c5_xreal_0 \ k1_numbers \quad (15)$$

Assume the following.

$$c7_xreal_0 = k6_numbers \quad (16)$$

Assume the following.

$$k1_xxreal_0 = k1_numbers \quad (17)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Leftrightarrow (X0 \in k1_numbers) \quad (18)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (19)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xcmplx_0 X0) \quad (20)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (\neg(\neg r1_xxreal_0 k6_numbers X0) \wedge ((\neg r1_xxreal_0 \\ & X2 X1) \wedge (r1_xxreal_0 (k3_xcmplx_0 X1 X0) (k3_xcmplx_0 X2 X0)))))) \end{aligned}$$