

t23_rat_1 (TMX-
aLbnm3TPzxoFdHGaPJ9nnu9wqAn3cFF4)

October 27, 2020

Let $v1_rat_1 : \iota \Rightarrow o$ be given. Let $k2_rat_1 : \iota \Rightarrow \iota$ be given. Let $k1_rat_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k7_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k5_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $v2_xreal_0 : \iota \Rightarrow o$ 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 $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $np_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ 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 $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow ((k7_xcmplx_0 X0 X1 = X0) \Rightarrow ((X0 = k6_numbers) \vee (X1 = np_1)))) \quad (1)$$

Assume the following.

$$k5_xcmplx_0 k6_numbers = k6_numbers \quad (2)$$

Assume the following.

$$\forall X0.(v1_rat_1 X0) \Rightarrow ((k2_rat_1 X0 = X0) \Leftrightarrow (k1_rat_1 X0 = np_1)) \quad (3)$$

Assume the following.

$$\forall X0.(v1_rat_1 X0) \Rightarrow ((v1_int_1 X0) \Rightarrow ((k1_rat_1 X0 = np_1) \wedge (k2_rat_1 X0 = X0))) \quad (4)$$

Assume the following.

$$\forall X0.(v1_rat_1 X0) \Rightarrow ((X0 \neq k6_numbers) \Rightarrow (k1_rat_1 X0 = k7_xcmplx_0 (k2_rat_1 X0) X0)) \quad (5)$$

Assume the following.

$$\forall X0.(v1_rat_1 X0) \Rightarrow ((k2_rat_1 X0 = k6_numbers) \Leftrightarrow (X0 = k6_numbers)) \quad (6)$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \text{ } np_1) \wedge (m2_subset_1 \text{ } np_1 \text{ } k1_numbers \text{ } k5_numbers)) \wedge \\ & ((m1_subset_1 \text{ } np_1 \text{ } k5_numbers) \wedge (m1_subset_1 \text{ } np_1 \text{ } k1_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$k2_xcmplx_0 \text{ } np_1 \text{ } (k4_xcmplx_0 \text{ } np_1) = np_0 \quad (8)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (9)$$

Assume the following.

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

Assume the following.

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

Assume the following.

$$\forall X0. (v1_rat_1 \text{ } X0) \Rightarrow ((v1_xcmplx_0 \text{ } (k5_xcmplx_0 \text{ } X0)) \wedge (v1_rat_1 \text{ } (k5_xcmplx_0 \text{ } X0))) \quad (12)$$

Assume the following.

$$\forall X0. (v1_rat_1 \text{ } X0) \Rightarrow (v1_int_1 \text{ } (k2_rat_1 \text{ } X0)) \quad (13)$$

Assume the following.

$$\forall X0. (m1_subset_1 \text{ } X0 \text{ } k4_ordinal1) \Rightarrow (v7_ordinal1 \text{ } X0) \quad (14)$$

Assume the following.

$$\forall X0. (v1_xreal_0 \text{ } X0) \Rightarrow (v1_xcmplx_0 \text{ } X0) \quad (15)$$

Assume the following.

$$\forall X0. (v1_int_1 \text{ } X0) \Rightarrow (v1_xreal_0 \text{ } X0) \quad (16)$$

Assume the following.

$$\forall X0. (v1_int_1 \text{ } X0) \Rightarrow (v1_rat_1 \text{ } X0) \quad (17)$$

Assume the following.

$$\forall X0. (v7_ordinal1 \text{ } X0) \Rightarrow (v1_int_1 \text{ } X0) \quad (18)$$

Assume the following.

$$\forall X0. (v1_rat_1 \text{ } X0) \Rightarrow (v1_xreal_0 \text{ } X0) \quad (19)$$

Theorem 1 $\forall X0. (v1_rat_1 \text{ } X0) \Rightarrow ((k2_rat_1 \text{ } X0 = k1_rat_1 \text{ } X0) \Leftrightarrow (X0 = np_1)).$