

t36_binari_4

(TMKrvnW9R7c98d2HxHVze7UDbq3DpVE5ESx)

October 27, 2020

Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k20_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k21_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_series_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k7_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k3_binari_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_binarith : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_binari_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k23_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_binari_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_int_2 : \iota \Rightarrow \iota$ be given. Let $k16_complex1 : \iota \Rightarrow \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_binari_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. \\ & ((\neg v1_xboole_0 X2) \wedge (v7_ordinal1 X2)) \Rightarrow ((r1_xxreal_0 (k23_binop_2 \\ & X0 X1) (k21_binop_2 (k5_series_1 np_2 (k7_nat_d X2 np_1)) np_1)) \Rightarrow \\ & (k3_binari_2 X2 (k7_binarith X2 (k1_binari_3 X2 X0) (k1_binari_3 \\ & X2 X1)) = k23_binop_2 X0 X1)))) \end{aligned} \tag{1}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1 X0) \wedge (v7_ordinal1 X1)) \Rightarrow (k23_binop_2 X0 X1 = k2_xcmplx_0 X0 X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v1_int_1 X0) \wedge (v1_int_1 X1)) \Rightarrow (k20_binop_2 X0 X1 = k2_xcmplx_0 X0 X1) \tag{4}$$

Assume the following.

$$\forall X0.(v1_int_1 X0) \Rightarrow (k1_int_2 X0 = k16_complex1 X0) \tag{5}$$

Assume the following.

$$v6_membered\ k4_ordinal1 \quad (6)$$

Assume the following.

$$\forall X0.(v1_int_1\ X0) \Rightarrow (m1_subset_1\ (k1_int_2\ X0)\ k5_numbers) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(v1_int_1\ X1) \Rightarrow (((\neg r1_xreal_0 \\ k6_numbers\ X1) \Rightarrow (k2_binari_4\ X0\ X1 = k1_binari_3\ X0\ (k1_int_2\ (k20_binop_2 \\ (k5_series_1\ np_2\ (k1_binari_4\ X0\ (k1_int_2\ X1)))\ X1)))) \wedge (r1_xreal_0 \\ k6_numbers\ X1) \Rightarrow (k2_binari_4\ X0\ X1 = k1_binari_3\ X0\ (k1_int_2\ X1)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0) \Rightarrow (((r1_xreal_0\ k6_numbers\ X0) \Rightarrow (k16_complex1\ X0 = X0)) \wedge ((\neg r1_xreal_0\ k6_numbers\ X0) \Rightarrow (k16_complex1\ X0 = k4_xcmplx_0\ X0))) \quad (9)$$

Assume the following.

$$\forall X0.(v1_int_1\ X0) \Rightarrow (v1_xreal_0\ X0) \quad (10)$$

Assume the following.

$$\forall X0.(v6_membered\ X0) \Rightarrow (\forall X1.(m1_subset_1\ X1\ X0) \Rightarrow (v7_ordinal1\ X1)) \quad (11)$$

Theorem 1

$$\begin{aligned} \forall X0.(v1_int_1\ X0) \Rightarrow (\forall X1.(v1_int_1\ X1) \Rightarrow (\forall X2. \\ ((\neg v1_xboole_0\ X2) \wedge (v7_ordinal1\ X2)) \Rightarrow (((r1_xreal_0\ (k20_binop_2 \\ X0\ X1)\ (k21_binop_2\ (k5_series_1\ np_2\ (k7_nat_d\ X2\ np_1))\ np_1)) \wedge \\ ((r1_xreal_0\ k6_numbers\ X0) \wedge (r1_xreal_0\ k6_numbers\ X1)) \Rightarrow \\ (k3_binari_2\ X2\ (k7_binarith\ X2\ (k2_binari_4\ X2\ X0)\ (k2_binari_4 \\ X2\ X1)) = k20_binop_2\ X0\ X1)))))) \end{aligned}$$