

l11_int_3

(TMSai2uk4z5GLJ9vqRdc8VHC67dZeFEH5i8)

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Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_euclid : \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ 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 $np_0 : \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k19_binop_2 : \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k18_complex1 : \iota \Rightarrow \iota$ be given. Let $k16_complex1 : \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_numbers : \iota$ be given. Assume the following.

$$\forall X0.(v1_int_1 X0) \Rightarrow ((\neg r1_xxreal_0 k6_numbers X0) \Rightarrow (r1_xxreal_0 X0 (k1_real_1 np_1))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Rightarrow ((v1_xboole_0 X1) \vee ((v3_xxreal_0 X0) \vee (v2_xxreal_0 X1)))))) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \Leftrightarrow (r1_xxreal_0 (k4_xcmplx_0 X1) (k4_xcmplx_0 X0)))) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (((r1_xxreal_0 X0 X1) \wedge (v2_xxreal_0 X0)) \Rightarrow (v2_xxreal_0 X1))) \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$(m2_subset_1 \ np_0 \ k1_numbers \ k5_numbers) \wedge ((m1_subset_1 \ np_0 \ k5_numbers) \wedge (m1_subset_1 \ np_0 \ k1_numbers)) \quad (7)$$

Assume the following.

$$v1_xboole_0 \ np_0 \quad (8)$$

Assume the following.

$$k4_xcmplx_0 \ np_0 = np_0 \quad (9)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (10)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 \ X0) \wedge ((v1_funct_1 \ X0) \wedge (v3_valued_0 \ X0))) \Rightarrow (k1_seq_1 \ X0 \ X1 = k1_funct_1 \ X0 \ X1) \quad (11)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (k1_real_1 \ X0 = k4_xcmplx_0 \ X0) \quad (12)$$

Assume the following.

$$\forall X0. (v1_int_1 \ X0) \Rightarrow (k19_binop_2 \ X0 = k4_xcmplx_0 \ X0) \quad (13)$$

Assume the following.

$$\forall X0. (v1_xcmplx_0 \ X0) \Rightarrow (k18_complex1 \ X0 = k16_complex1 \ X0) \quad (14)$$

Assume the following.

$$\forall X0. (v1_xcmplx_0 \ X0) \Rightarrow (k4_xcmplx_0 \ (k4_xcmplx_0 \ X0) = X0) \quad (15)$$

Assume the following.

$$\forall X0. (v1_xreal_0 \ X0) \Rightarrow ((v1_xcmplx_0 \ (k4_xcmplx_0 \ X0)) \wedge (v1_xreal_0 \ (k4_xcmplx_0 \ X0))) \quad (16)$$

Assume the following.

$$v3_membered \ k1_numbers \quad (17)$$

Assume the following.

$$\forall X0.((\neg v3_xxreal_0 X0) \wedge (v1_xreal_0 X0)) \Rightarrow ((v1_xcmplx_0 (k4_xcmplx_0 X0)) \wedge (\neg v2_xxreal_0 (k4_xcmplx_0 X0))) \quad (18)$$

Assume the following.

$$(v1_funct_1 k2_euclid) \wedge ((v1_funct_2 k2_euclid k1_numbers k1_numbers) \wedge (m1_subset_1 k2_euclid (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \quad (19)$$

Assume the following.

$$\forall X0.(v1_int_1 X0) \Rightarrow (m1_subset_1 (k19_binop_2 X0) k4_numbers) \quad (20)$$

Assume the following.

$$\forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k1_numbers k1_numbers) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))))) \Rightarrow ((X0 = k2_euclid) \Leftrightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (k1_seq_1 X0 X1 = k18_complex1 X1))) \quad (21)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (((r1_xxreal_0 k6_numbers X0) \Rightarrow (k16_complex1 X0 = X0)) \wedge ((\neg r1_xxreal_0 k6_numbers X0) \Rightarrow (k16_complex1 X0 = k4_xcmplx_0 X0))) \quad (22)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xcmplx_0 X0) \quad (23)$$

Assume the following.

$$\forall X0.(v1_int_1 X0) \Rightarrow (v1_xreal_0 X0) \quad (24)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k5_numbers) \Rightarrow (\neg v3_xxreal_0 X0) \quad (25)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (26)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (27)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_numbers) \Rightarrow (v1_int_1 X0) \quad (28)$$

Assume the following.

$$\forall X0.\forall X1.(v3_membered\ X1)\Rightarrow(\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v3_valued_0\ X2)) \quad (29)$$

Theorem 1

$$\forall X0.(v1_int_1\ X0)\Rightarrow((X0 = k6_numbers)\vee(r1_xxreal_0\ np_1\ (k1_funct_1\ k2_euclid\ X0)))$$