

t25_ec_pf_1 (TMFS-
gsLJ3WYwA9dA9KiGmexDwbaTAYPUtyK)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_int_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k9_int_3 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k2_binom : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_xreal_0 : \iota \Rightarrow o$ be given. Let $v3_xreal_0 : \iota \Rightarrow o$ be given. Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $k6_int_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_int_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_nat_d : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_newton : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow ((r1_xreal_0 X0 X1) \Rightarrow ((v1_xboole_0 X0) \vee ((v2_xreal_0 X1) \vee (v3_xreal_0 X0)))))) \quad (1)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow ((\neg r1_xreal_0 X0 k6_numbers) \Rightarrow (\forall X1.(v1_int_1 X1) \Rightarrow ((k6_int_1 X1 X0 = k6_numbers) \Leftrightarrow (r1_int_1 X0 X1)))) \quad (2)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. ((v7_ordinal1 X2) \wedge (v1_int_2 X2)) \Rightarrow ((r1_nat_d X2 (k1_newton X0 X1)) \Rightarrow (r1_nat_d X2 X0)))) \quad (3)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (\forall X2. ((v7_ordinal1 X2) \wedge (v1_int_2 X2)) \Rightarrow (\forall X3.(m1_subset_1 X3 (u1_struct_0 (k9_int_3 X2))) \Rightarrow ((X3 = k4_nat_d X0 X2) \Rightarrow (k2_binom (k9_int_3 X2) X3 X1 = k4_nat_d (k1_newton X0 X1) X2)))))) \quad (4)$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.((v7_ordinal1\ X0)\wedge(v1_int_2\ X0))\Rightarrow(\forall X1.(m1_subset_1\ X1\ (u1_struct_0\ (k9_int_3\ X0)))\Rightarrow(\exists X2.(v7_ordinal1\ X2)\wedge(X1 = k4_nat_d\ X2\ X0))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0)\wedge(v7_ordinal1\ X1))\Rightarrow((r1_nat_d\ X0\ X1)\Leftrightarrow(r1_int_1\ X0\ X1)) \quad (7)$$

Assume the following.

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

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0)\wedge(v7_ordinal1\ X1))\Rightarrow(k4_nat_d\ X0\ X1 = k6_int_1\ X0\ X1) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0)\wedge(v7_ordinal1\ X1))\Rightarrow(v7_ordinal1\ (k1_newton\ X0\ X1)) \quad (11)$$

Assume the following.

$$v1_xboole_0\ k1_xboole_0 \quad (12)$$

Assume the following.

$$m1_subset_1\ k5_numbers\ (k1_zfmisc_1\ k1_numbers) \quad (13)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ (k1_zfmisc_1\ k1_numbers))\Rightarrow(v3_membered\ X0) \quad (14)$$

Assume the following.

$$\forall X0.(v1_xboole_0\ X0)\Rightarrow(v7_ordinal1\ X0) \quad (15)$$

Assume the following.

$$\forall X0.((v1_xxreal_0\ X0)\wedge(v2_xxreal_0\ X0))\Rightarrow((\neg v1_xboole_0\ X0)\wedge((v1_xxreal_0\ X0)\wedge(\neg v3_xxreal_0\ X0))) \quad (16)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow((v7_ordinal1\ X0)\wedge(\neg v3_xxreal_0\ X0)) \quad (17)$$

Assume the following.

$$\forall X0.((v7_ordinal1\ X0)\wedge(v1_int_2\ X0))\Rightarrow((\neg v1_xboole_0\ X0)\wedge((v7_ordinal1\ X0)\wedge(v1_int_2\ X0))) \quad (18)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_xreal_0\ X0) \quad (19)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_xreal_0\ X0) \quad (20)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_int_1\ X0) \quad (21)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow(v1_xreal_0\ X1)) \quad (22)$$

Theorem 1

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.((v7_ordinal1\ X1)\wedge(v1_int_2\ X1))\Rightarrow(\forall X2.(m1_subset_1\ X2\ (u1_struct_0\ (k9_int_3\ X1)))\Rightarrow(\neg(X2\neq k6_numbers)\wedge(k2_binom\ (k9_int_3\ X1)\ X2\ X0 = k6_numbers))))$$