

t25_nat_4

(TMS7jaRTAHm77mmNsQJg3m9ZvCtuZMaXmrs)

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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 $k9_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k4_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k13_newton : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_int_2 : \iota \Rightarrow o$ be given. Let $k4_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_nat_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $r1_nat_d : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
 & (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (\forall X2.(m2_subset_1 \\
 X2 k1_numbers k5_numbers) \Rightarrow (((k9_real_1 X0 np_1 = k4_nat_1 X1 X2) \wedge \\
 & (\forall X3.(m2_subset_1 X3 k1_numbers k5_numbers) \Rightarrow \neg(r1_nat_d \\
 X3 X1) \wedge (v1_int_2 X3) \wedge (\forall X4.(m2_subset_1 X4 k1_numbers \\
 k5_numbers) \Rightarrow \neg(k4_nat_d (k13_newton X4 (k7_nat_d X0 np_1)) X0 = \\
 np_1) \wedge (k6_nat_d (k7_nat_d (k13_newton X4 (k3_nat_d (k7_nat_d \\
 X0 np_1) X3)) np_1) X0 = np_1)))))) \Rightarrow ((r1_xxreal_0 X1 X2) \vee ((\\
 r1_xxreal_0 X2 k6_numbers) \vee (v1_int_2 X0))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.(m2_subset_1 X0 k1_numbers k5_numbers) \Rightarrow (\forall X1. \\
 & (m2_subset_1 X1 k1_numbers k5_numbers) \Rightarrow (\forall X2.(m2_subset_1 \\
 X2 k1_numbers k5_numbers) \Rightarrow (((r1_nat_d X0 (k13_newton X1 X2)) \wedge \\
 & ((v1_int_2 X1) \wedge (v1_int_2 X0))) \Rightarrow (X1 = X0))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge ((\neg v1_xboole_0 X1) \wedge \\
 & (m1_subset_1 X1 (k1_zfmisc_1 X0)))) \Rightarrow (\forall X2.(m2_subset_1 \\
 X2 X0 X1) \Leftrightarrow (m1_subset_1 X2 X1))
 \end{aligned} \tag{3}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{4}$$

Assume the following.

$$(\neg v1_xboole_0 \ k4_ordinal1) \wedge (v3_ordinal1 \ k4_ordinal1) \quad (5)$$

Assume the following.

$$\neg v1_xboole_0 \ k1_numbers \quad (6)$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 \ X0 \ k5_numbers) \wedge (m1_subset_1 \ X1 \ k5_numbers)) \Rightarrow (m2_subset_1 \ (k13_newton \ X0 \ X1) \ k1_numbers \ k5_numbers) \quad (8)$$

Theorem 1

$$\begin{aligned} & \forall X0. (m2_subset_1 \ X0 \ k1_numbers \ k5_numbers) \Rightarrow (\forall X1. \\ & (m2_subset_1 \ X1 \ k1_numbers \ k5_numbers) \Rightarrow (\forall X2. (m2_subset_1 \\ & X2 \ k1_numbers \ k5_numbers) \Rightarrow (\forall X3. (m2_subset_1 \ X3 \ k1_numbers \\ & k5_numbers) \Rightarrow (\forall X4. (m2_subset_1 \ X4 \ k1_numbers \ k5_numbers) \Rightarrow \\ & (\forall X5. (m2_subset_1 \ X5 \ k1_numbers \ k5_numbers) \Rightarrow (((k9_real_1 \\ & X0 \ np_1 = k4_nat_1 \ (k13_newton \ X5 \ X3) \ X2) \wedge ((v1_int_2 \ X5) \wedge ((k4_nat_d \\ & (k13_newton \ X4 \ (k7_nat_d \ X0 \ np_1)) \ X0 = np_1) \wedge (k6_nat_d \ (k7_nat_d \\ & (k13_newton \ X4 \ (k3_nat_d \ (k7_nat_d \ X0 \ np_1) \ X5)) \ np_1) \ X0 = np_1)))))) \Rightarrow \\ & ((r1_xreal_0 \ (k13_newton \ X5 \ X3) \ X2) \vee ((r1_xreal_0 \ X2 \ k6_numbers) \vee \\ & (v1_int_2 \ X0))))))))) \end{aligned}$$