

t38\_nat\_3  
(TMTJ5FAnpL8uruNiL1uHASuDig1cvQAGca)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_int\_2 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $r1\_nat\_d : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k12\_nat\_3 : \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k1\_newton : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  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  $np\_0 : \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k23\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k11\_nat\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_nat\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_newton : \iota$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_valued\_0 : \iota \Rightarrow o$  be given. Let  $r1\_int\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k1\_newton X0 np\_1 = X0) \quad (2)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$(m2\_subset\_1 np\_0 k1\_numbers k5\_numbers) \wedge ((m1\_subset\_1 np\_0 k5\_numbers) \wedge (m1\_subset\_1 np\_0 k1\_numbers)) \quad (4)$$

Assume the following.

$$v1\_xboole\_0 np\_0 \quad (5)$$

Assume the following.

$$k2\_xcmplx\_0 np\_0 np\_1 = np\_1 \quad (6)$$

Assume the following.

$$r1\_xreal\_0 \text{ np\_1 } \text{ np\_1} \quad (7)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (8)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1 \ X0)\wedge(v7\_ordinal1 \ X1))\Rightarrow( \quad (10)$$

$$k23\_binop\_2 \ X0 \ X1 = k2\_xcmplx\_0 \ X0 \ X1)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 \ X0)\wedge((v1\_funct\_1 \ X0)\wedge(v3\_valued\_0 \quad (11)$$

$$X0)))\Rightarrow(k1\_seq\_1 \ X0 \ X1 = k1\_funct\_1 \ X0 \ X1)$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1 \ X0)\wedge(v7\_ordinal1 \ X1))\Rightarrow( \quad (12)$$

$$k11\_nat\_3 \ X0 \ X1 = k10\_nat\_3 \ X0 \ X1)$$

Assume the following.

$$v6\_membered \ k4\_ordinal1 \quad (13)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 \ X0)\Rightarrow((v1\_relat\_1 \ (k12\_nat\_3 \ X0))\wedge(( \quad (14)$$

$$v4\_relat\_1 \ (k12\_nat\_3 \ X0) \ k10\_newton)\wedge((v1\_funct\_1 \ (k12\_nat\_3$$

$$X0))\wedge((v1\_partfun1 \ (k12\_nat\_3 \ X0) \ k10\_newton)\wedge(v4\_valued\_0$$

$$(k12\_nat\_3 \ X0))))))$$

Assume the following.

$$\forall X0.(v7\_ordinal1 \ X0)\Rightarrow((v1\_relat\_1 \ (k12\_nat\_3 \ X0))\wedge(( \quad (15)$$

$$v4\_relat\_1 \ (k12\_nat\_3 \ X0) \ k10\_newton)\wedge((v1\_funct\_1 \ (k12\_nat\_3$$

$$X0))\wedge(v1\_partfun1 \ (k12\_nat\_3 \ X0) \ k10\_newton))))$$

Assume the following.

$$\forall X0.(v7\_ordinal1 \ X0)\Rightarrow(\forall X1.((v1\_relat\_1 \ X1)\wedge(( \quad (16)$$

$$v4\_relat\_1 \ X1 \ k10\_newton)\wedge((v1\_funct\_1 \ X1)\wedge(v1\_partfun1 \ X1 \ k10\_newton))))\Rightarrow$$

$$((X1 = k12\_nat\_3 \ X0)\Leftrightarrow(\forall X2.((v7\_ordinal1 \ X2)\wedge(v1\_int\_2$$

$$X2))\Rightarrow(k1\_funct\_1 \ X1 \ X2 = k11\_nat\_3 \ X0 \ X2))))$$

Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1\ X0) \Rightarrow (\forall X1.(v7\_ordinal1\ X1) \Rightarrow (\neg \\ (X1 \neq np\_1) \wedge ((X0 \neq k6\_numbers) \wedge (\neg \forall X2.(v7\_ordinal1\ X2) \Rightarrow \\ ((X2 = k10\_nat\_3\ X0\ X1) \Leftrightarrow ((r1\_nat\_d\ (k1\_newton\ X1\ X2)\ X0) \wedge (\neg r1\_nat\_d \\ (k1\_newton\ X1\ (k23\_binop\_2\ X2\ np\_1))\ X0)))))) \end{aligned} \quad (17)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1\ X0) \Rightarrow ((v1\_int\_2\ X0) \Leftrightarrow ((\neg r1\_xreal\_0\ X0 \\ np\_1) \wedge (\forall X1.(v7\_ordinal1\ X1) \Rightarrow (\neg (r1\_int\_1\ X1\ X0) \wedge ((X1 \neq \\ np\_1) \wedge (X1 \neq X0)))))) \end{aligned} \quad (18)$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v4\_valued\_0\ X0)) \Rightarrow ((v1\_relat\_1\ X0) \wedge (v3\_valued\_0\ X0)) \quad (19)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (v1\_xcmplx\_0\ X0) \quad (20)$$

Assume the following.

$$\forall X0.(v6\_membered\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ X0) \Rightarrow (v7\_ordinal1\ X1)) \quad (21)$$

**Theorem 1**

$$\begin{aligned} \forall X0.((v7\_ordinal1\ X0) \wedge (v1\_int\_2\ X0)) \Rightarrow (\forall X1.((\neg \\ v1\_xboole\_0\ X1) \wedge (v7\_ordinal1\ X1)) \Rightarrow (\neg (r1\_nat\_d\ X0\ X1) \wedge (k1\_seq\_1 \\ (k12\_nat\_3\ X1)\ X0 = k6\_numbers))) \end{aligned}$$