

t21\_nat\_1

(TMUm5roKPXELckEYbjYXXSD9RF3DKW5HJj3)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k1\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1 X0) \Rightarrow (\neg(X0 \neq k6\_numbers) \wedge (\forall X1. \\ (v7\_ordinal1 X1) \Rightarrow (X0 \neq k1\_nat\_1 X1 np\_1))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (2)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (\forall X1.(v1\_xcmplx\_0 X1) \Rightarrow (X0 = k2\_xcmplx\_0 (k6\_xcmplx\_0 X0 X1) X1)) \quad (3)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k2\_xcmplx\_0 X0 k6\_numbers = X0) \quad (4)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (\forall X1.(v1\_xcmplx\_0 X1) \Rightarrow (k2\_xcmplx\_0 X0 X1 = k6\_xcmplx\_0 X0 (k4\_xcmplx\_0 X1))) \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (\neg \\ (r1\_xxreal\_0 X0 X1) \wedge (\forall X2.(v7\_ordinal1 X2) \Rightarrow (X1 \neq k2\_xcmplx\_0 \\ X0 X2)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & ((v2\_xreal\_0 \ np\_1) \wedge (m2\_subset\_1 \ np\_1 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_1 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_1 \ k1\_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$(m2\_subset\_1 \ np\_0 \ k1\_numbers \ k5\_numbers) \wedge ((m1\_subset\_1 \ np\_0 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_0 \ k1\_numbers)) \quad (8)$$

Assume the following.

$$v1\_xboole\_0 \ np\_0 \quad (9)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (10)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (11)$$

Assume the following.

$$\exists X0. (v1\_xboole\_0 \ X0) \wedge ((v1\_xcmplx\_0 \ X0) \wedge ((v1\_xreal\_0 \ X0) \wedge (v1\_xreal\_0 \ X0))) \quad (12)$$

Assume the following.

$$\forall X0. (v1\_xcmplx\_0 \ X0) \Rightarrow (k4\_xcmplx\_0 \ (k4\_xcmplx\_0 \ X0) = X0) \quad (13)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xreal\_0 \ X0) \wedge (v1\_xreal\_0 \ X1)) \Rightarrow (v1\_xreal\_0 \ (k6\_xcmplx\_0 \ X0 \ X1)) \quad (14)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xcmplx\_0 \ X0) \wedge (v1\_xcmplx\_0 \ X1)) \Rightarrow (v1\_xcmplx\_0 \ (k6\_xcmplx\_0 \ X0 \ X1)) \quad (15)$$

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.

$$\forall X0. \forall X1. ((v7\_ordinal1 \ X0) \wedge (m1\_subset\_1 \ X1 \ k5\_numbers)) \Rightarrow (m2\_subset\_1 \ (k1\_nat\_1 \ X0 \ X1) \ k1\_numbers \ k5\_numbers) \quad (17)$$

Assume the following.

$$k1\_xboole\_0 = the \ (\lambda X0 : \iota. v1\_xboole\_0 \ X0) \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0 X0)\wedge(v1\_xcmplx\_0 X1))\Rightarrow( k2\_xcmplx\_0 X0 X1 = k2\_xcmplx\_0 X1 X0) \quad (19)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1)\Rightarrow(v7\_ordinal1 X0) \quad (20)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0)\Rightarrow(v1\_xcmplx\_0 X0) \quad (21)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(v1\_xreal\_0 X0) \quad (22)$$

**Theorem 1**

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(\forall X1.(v7\_ordinal1 X1)\Rightarrow(( r1\_xreal\_0 X0 X1)\Rightarrow(m2\_subset\_1 (k6\_xcmplx\_0 X1 X0) k1\_numbers k5\_numbers)))$$