

# t2\_nat\_2 (TMYPa- jHHL8S2itNFSgGeJYWC08y3DjpktQu)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k3\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k5\_int\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\neg(k6\_numbers \neq X0) \wedge (r1\_xxreal\_0 X0 k6\_numbers)) \quad (1)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow ((\neg r1\_xxreal\_0 X1 X0) \Rightarrow (k3\_nat\_d X0 X1 = k6\_numbers))) \quad (2)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1 X0) \wedge (v7\_ordinal1 X1)) \Rightarrow (k3\_nat\_d X0 X1 = k5\_int\_1 X0 X1) \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1 X0) \wedge (v7\_ordinal1 X1)) \Rightarrow (k1\_nat\_d X0 X1 = k5\_int\_1 X0 X1) \quad (5)$$

Assume the following.

$$v1\_xboole\_0 k1\_xboole\_0 \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v7\_ordinal1 X2) \Rightarrow ((X2 = k1\_nat\_d X0 X1) \Leftrightarrow (\neg(\forall X3.(v7\_ordinal1 \\ & X3) \Rightarrow (\neg(X0 = k2\_xcmplx\_0 (k3\_xcmplx\_0 X1 X2) X3) \wedge (\neg r1\_xxreal\_0 \\ & X1 X3)))) \wedge (\neg(X2 = k6\_numbers) \wedge (X1 = k6\_numbers)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (v7\_ordinal1 X0) \quad (8)$$

**Theorem 1**  $\forall X0.(v7\_ordinal1 X0) \Rightarrow (k3\_nat\_d k6\_numbers X0 = k6\_numbers)$ .