

t6\_pepin

(TMa78fEQhmxVGnSZT6VCq4sDemTnA7gPKW2)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $r1\_nat\_d : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (\forall X2. \\ & (v7\_ordinal1 X2) \Rightarrow (((r1\_nat\_d X0 X1) \wedge (r1\_nat\_d X0 X2)) \Leftrightarrow (r1\_nat\_d \\ & X0 (k6\_nat\_d X1 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow ((r1\_nat\_d X0 X1) \Rightarrow (k6\_nat\_d X0 X1 = X0))) \tag{2}$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\neg(k6\_numbers \neq X0) \wedge (r1\_xxreal\_0 X0 k6\_numbers)) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (( \\ & \neg r1\_xxreal\_0 X0 k6\_numbers) \Rightarrow (k6\_nat\_d X1 X0 = k6\_nat\_d X0 (k4\_nat\_d \\ & X1 X0)))) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (k4\_nat\_d X0 X0 = k6\_numbers) \tag{5}$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (k4\_nat\_d (k3\_xcmplx\_0 X0 X1) X0 = k6\_numbers)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1 X0) \wedge (v7\_ordinal1 X1)) \Rightarrow (r1\_nat\_d X0 X0) \tag{7}$$

Assume the following.

$$\exists X0.(\neg v1\_xboole\_0 X0)\wedge(v7\_ordinal1 X0) \quad (8)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(\forall X1.(v7\_ordinal1 X1)\Rightarrow((r1\_nat\_d X0 X1)\Leftrightarrow(\exists X2.(v7\_ordinal1 X2)\wedge(X1 = k3\_xcmplx\_0 X0 X2)))) \quad (9)$$

**Theorem 1**

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(\forall X1.(v7\_ordinal1 X1)\Rightarrow((X0\neq k6\_numbers)\Rightarrow((r1\_nat\_d X0 X1)\Leftrightarrow(k4\_nat\_d X1 X0 = k6\_numbers))))$$