

### t3\_algseq\_1

(TMNarw57t7wXD6UPd67oUxFw21bTK1Vtoti)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k7\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k1\_ordinal1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow ((\neg(r1\_xxreal\_0 X1 X0) \wedge (\neg r1\_xxreal\_0 (k1\_nat\_1 X0 np\_1) X1)) \Rightarrow (r1\_xxreal\_0 X0 (k7\_nat\_d X1 np\_1)))) \quad (1)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow ((r1\_xxreal\_0 (k1\_nat\_1 X0 np\_1) X1) \Rightarrow ((\neg r1\_xxreal\_0 X1 (k7\_nat\_d X0 np\_1)) \wedge ((\neg r1\_xxreal\_0 X1 (k7\_nat\_d X0 np\_2)) \wedge (r1\_xxreal\_0 X0 X1)))))) \quad (2)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow ((X0 \in k7\_card\_1 X1) \Leftrightarrow (\neg r1\_xxreal\_0 X1 X0))) \quad (3)$$

Assume the following.

$$\forall X0.((v3\_ordinal1 X0) \wedge (v7\_ordinal1 X0)) \Rightarrow (v7\_ordinal1 (k1\_ordinal1 X0)) \quad (4)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (k1\_ordinal1 X0 = k1\_nat\_1 X0 np\_1) \quad (5)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow ((v3\_ordinal1 X0) \wedge (v7\_ordinal1 X0)) \quad (6)$$

**Theorem 1**  $\forall X0.(v7\_ordinal1 X0) \Rightarrow (X0 \in k7\_card\_1 (k1\_nat\_1 X0 np\_1)).$