

## t8\_chord

(TMVmg4aYXRju4e4BPMZwy1qpVHDkgQ1bdRt)

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_abian : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_6 : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $np\_3 : \iota$  be given. Let  $np\_5 : \iota$  be given. Let  $np\_4 : \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.((v7\_ordinal1 X0) \wedge (\neg v1\_abian X0)) \Rightarrow (\neg (r1\_xxreal\_0 X0 np\_4) \wedge ((X0 \neq np\_1) \wedge (X0 \neq np\_3))) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 X0 X1) \wedge (r1\_xxreal\_0 X1 X0)) \Rightarrow (X0 = X1)) \quad (2)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow ((\neg r1\_xxreal\_0 (k1\_nat\_1 X1 np\_1) X0) \Leftrightarrow (r1\_xxreal\_0 X0 X1))) \quad (3)$$

Assume the following.

$$((v2\_xxreal\_0 np\_6) \wedge (m2\_subset\_1 np\_6 k1\_numbers k5\_numbers)) \wedge ((m1\_subset\_1 np\_6 k5\_numbers) \wedge (m1\_subset\_1 np\_6 k1\_numbers)) \quad (4)$$

Assume the following.

$$((v2\_xxreal\_0 np\_5) \wedge (m2\_subset\_1 np\_5 k1\_numbers k5\_numbers)) \wedge ((m1\_subset\_1 np\_5 k5\_numbers) \wedge (m1\_subset\_1 np\_5 k1\_numbers)) \quad (5)$$

Assume the following.

$$((v2\_xxreal\_0 np\_4) \wedge (m2\_subset\_1 np\_4 k1\_numbers k5\_numbers)) \wedge ((m1\_subset\_1 np\_4 k5\_numbers) \wedge (m1\_subset\_1 np\_4 k1\_numbers)) \quad (6)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 \ np\_3) \wedge (m2\_subset\_1 \ np\_3 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_3 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_3 \ k1\_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 \ np\_1) \wedge (m2\_subset\_1 \ np\_1 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_1 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_1 \ k1\_numbers)) \end{aligned} \quad (8)$$

Assume the following.

$$k3\_xcmplx\_0 \ np\_2 \ np\_3 = np\_6 \quad (9)$$

Assume the following.

$$k2\_xcmplx\_0 \ np\_5 \ np\_1 = np\_6 \quad (10)$$

Assume the following.

$$k2\_xcmplx\_0 \ np\_4 \ np\_1 = np\_5 \quad (11)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v7\_ordinal1 \ X0) \wedge (m1\_subset\_1 \ X1 \ k5\_numbers)) \Rightarrow \\ & (k1\_nat\_1 \ X0 \ X1 = k2\_xcmplx\_0 \ X0 \ X1) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0. (v1\_int\_1 \ X0) \Rightarrow (v1\_abian \ (k3\_xcmplx\_0 \ np\_2 \ X0)) \quad (14)$$

Assume the following.

$$\forall X0. (m1\_subset\_1 \ X0 \ k4\_ordinal1) \Rightarrow (v7\_ordinal1 \ X0) \quad (15)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 \ X0) \Rightarrow (v1\_xxreal\_0 \ X0) \quad (16)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 \ X0) \Rightarrow (v1\_int\_1 \ X0) \quad (17)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. ((v7\_ordinal1 \ X0) \wedge (\neg v1\_abian \ X0)) \Rightarrow (\neg (r1\_xxreal\_0 \\ & \ X0 \ np\_6) \wedge ((X0 \neq np\_1) \wedge ((X0 \neq np\_3) \wedge (X0 \neq np\_5)))) \end{aligned}$$