

# t32\_chord (TMHn- thBM1gKYtPP13s5QTpncCFh86gwDU7h)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $v1\_glib\_000 : \iota \Rightarrow o$  be given. Let  $m3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v5\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v6\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_abian : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 X0 X1) \wedge (r1\_xxreal\_0 X1 X0)) \Rightarrow (X0 = X1)) \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0))))) \Rightarrow (\forall X1.((v5\_glib\_001 X1 X0) \wedge (m3\_glib\_001 X1 X0)) \Rightarrow ((\neg v1\_glib\_001 X1 X0) \Rightarrow (\forall X2. \\ ((\neg v1\_abian X2) \wedge (m1\_subset\_1 X2 k5\_numbers)) \Rightarrow (\forall X3.((\neg v1\_abian X3) \wedge (m1\_subset\_1 X3 k5\_numbers)) \Rightarrow (\neg(\neg r1\_xxreal\_0 X3 X2) \wedge ((r1\_xxreal\_0 X3 (k3\_finseq\_1 X1)) \wedge (k1\_funct\_1 X1 X2 = k1\_funct\_1 X1 X3))))))) \end{aligned} \quad (2)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ & X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1.(m3\_glib\_001 \\ & X1 X0) \Rightarrow ((v6\_glib\_001 X1 X0) \Leftrightarrow (\forall X2.((\neg v1\_abian X2) \wedge (m1\_subset\_1 \\ & X2 k5\_numbers)) \Rightarrow (\forall X3.((\neg v1\_abian X3) \wedge (m1\_subset\_1 X3 \\ & k5\_numbers)) \Rightarrow (((r1\_xxreal\_0 X2 (k3\_finseq\_1 X1)) \wedge ((r1\_xxreal\_0 \\ & X3 (k3\_finseq\_1 X1)) \wedge (k1\_funct\_1 X1 X2 = k1\_funct\_1 X1 X3))) \Rightarrow (X2 = \\ & X3)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \quad (5)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (v1\_xxreal\_0 X0) \quad (6)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ & X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1.(m3\_glib\_001 \\ & X1 X0) \Rightarrow ((v5\_glib\_001 X1 X0) \Rightarrow ((v1\_glib\_001 X1 X0) \vee (v6\_glib\_001 \\ & X1 X0)))) \end{aligned}$$