t41_chord (TMEzE-JXT6dTUvYydDzYXCSnKJ4yPHP3dAL9)

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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 $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k6\_glib\_000 : \iota \Rightarrow \iota$ be given. Let $m2\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k21\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_chord : \iota \Rightarrow \iota \Rightarrow o$ be given. 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 $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $r1\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $v1\_xcmplx\_0 : \iota \Rightarrow o$ be given. Let $k6\_numbers : \iota$ 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 $np\_\_0 : \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $k1\_card\_1 : \iota \Rightarrow \iota$ be given. Let $m1\_glib\_000 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k25\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_glib\_000 : \iota \Rightarrow \iota$ be given. Let $k24\_glib\_000 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6\_membered : \iota \Rightarrow o$ be given. Let $v1\_card\_1 : \iota \Rightarrow o$ be given. Let $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r5\_glib\_000 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_membered : \iota \Rightarrow o$ be given. Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. Let $v1\_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xreal\_0\ X1) \Rightarrow (\forall X2. (v1\_xreal\_0\ X2) \Rightarrow (\forall X3.(v1\_xreal\_0\ X3) \Rightarrow (((r1\_xxreal\_0\ X0\ X1) \wedge (r1\_xxreal\_0\ X2\ X3)) \Rightarrow (r1\_xxreal\_0\ (k2\_xcmplx\_0\ X0\ X2)\ (k2\_xcmplx\_0\ X1\ X3))))))) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0)))))\Rightarrow(\forall X1.(m3\_glib\_001\ X1\ X0)\Rightarrow(\forall X2.((\neg v1\_abian\ X2)\wedge(m1\_subset\_1\ X2\ k5\_numbers))\Rightarrow((r1\_xxreal\_0\ X2\ (k3\_finseq\_1\ X1))\Rightarrow(k1\_funct\_1\ X1\ X2\in k6\_glib\_000\ X0)))) \tag{2}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(X0 = k1\_xboole\_0) \tag{3}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0)))))\Rightarrow(\forall X1.(m3\_glib\_001\ X1\ X0)\Rightarrow((v1\_chord\ X1\ X0)\Rightarrow(\forall X2.((v7\_ordinal1\ X2)\wedge(\neg v1\_abian\ X2))\Rightarrow(\forall X3.((v7\_ordinal1\ X3)\wedge(\neg v1\_abian\ X3))\Rightarrow((r1\_xxreal\_0\ X3\ (k3\_finseq\_1\ X1))\Rightarrow((r1\_xxreal\_0\ X3\ (k1\_nat\_1\ X2\ np\_\_2))\vee(\forall X4.\neg r1\_glib\_000\ X0\ (k1\_funct\_1\ X1\ X2)\ (k1\_funct\_1\ X1\ X3)\ X4))))))) \tag{4}$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0)\Rightarrow(\forall X1.(v1\_xxreal\_0\ X1)\Rightarrow(\forall X2.(v1\_xxreal\_0\ X2)\Rightarrow(((r1\_xxreal\_0\ X0\ X1)\wedge(r1\_xxreal\_0\ X1\ X2))\Rightarrow(r1\_xxreal\_0\ X0\ X2)))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(X0\in X1)\Rightarrow(m1\_subset\_1\ X0\ X1) \tag{6}$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0)\Rightarrow(k2\_xcmplx\_0\ X0\ k6\_numbers = X0) \tag{7}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0)))))\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k6\_glib\_000\ X0)))\Rightarrow(\forall X2.(m2\_glib\_000\ X2\ X0\ X1\ (k21\_glib\_000\ X0\ X1))\Rightarrow(\forall X3.\forall X4.((X3\in X1)\wedge(X4\in X1))\Rightarrow(\forall X5.(r1\_glib\_000\ X0\ X3\ X4\ X5)\Rightarrow(r1\_glib\_000\ X2\ X3\ X4\ X5))))) \tag{8}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_2)\wedge(m2\_subset\_1\ np\_\_2\ k1\_numbers\ k5\_numbers))\wedge((m1\_subset\_1\ np\_\_2\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_2\ k1\_numbers)) \tag{9}$$

Assume the following.

$$v1\_xboole\_0\ np\_\_0 \tag{10}$$

Assume the following.

$$r1\_xxreal\_0\ np\_\_0\ np\_\_2 \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.r1\_tarski\ X0\ X0 \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0) \Leftrightarrow (m1\_finseq\_1\ X1\ X0) \tag{13}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{14}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{15}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow (k3\_finseq\_1\ X0 = k1\_card\_1\ X0) \tag{16}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finset\_1\ X0) \wedge (v1\_glib\_000\ X0))))) \wedge (m1\_glib\_000\ X1\ X0)) \Rightarrow (k25\_glib\_000\ X0\ X1 = k7\_glib\_000\ X1) \tag{17}$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1\ X0) \wedge ((v4\_relat\_1\ X0\ k5\_numbers) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finset\_1\ X0) \wedge (v1\_glib\_000\ X0))))) \wedge (m1\_glib\_000\ X1\ X0)) \Rightarrow (k24\_glib\_000\ X0\ X1 = k6\_glib\_000\ X1) \tag{18}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0) \wedge (m1\_subset\_1\ X1\ k5\_numbers)) \Rightarrow (k1\_nat\_1\ X0\ X1 = k2\_xcmplx\_0\ X0\ X1) \tag{19}$$

Assume the following.

$$\exists X0.(v1\_xboole\_0\ X0) \wedge ((v1\_xcmplx\_0\ X0) \wedge ((v1\_xxreal\_0\ X0) \wedge (v1\_xreal\_0\ X0))) \tag{20}$$

Assume the following.

$$v6\_membered\ k4\_ordinal1 \tag{21}$$

Assume the following.

$$\forall X0.(v1\_finset\_1\ X0)\Rightarrow((v1\_finset\_1\ (k1\_card\_1\ X0))\wedge(v1\_card\_1\ (k1\_card\_1\ X0))) \tag{22}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0)))))\Rightarrow(\forall X1.(m3\_glib\_001\ X1\ X0)\Rightarrow(m2\_finseq\_1\ X1\ (k2\_xboole\_0\ (k6\_glib\_000\ X0)\ (k7\_glib\_000\ X0)))) \tag{23}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0)))))\Rightarrow(\forall X3.(m2\_glib\_000\ X3\ X0\ X1\ X2)\Rightarrow(m1\_glib\_000\ X3\ X0)) \tag{24}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0)))))\Rightarrow(\forall X1.(m1\_glib\_000\ X1\ X0)\Rightarrow((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ k5\_numbers)\wedge((v1\_funct\_1\ X1)\wedge((v1\_finset\_1\ X1)\wedge(v1\_glib\_000\ X1))))))) \tag{25}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1))) \tag{26}$$

Assume the following.

$$m1\_subset\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k1\_numbers) \tag{27}$$

Assume the following.

$$\forall X0.v1\_card\_1\ (k1\_card\_1\ X0) \tag{28}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0)))))\Rightarrow(\forall X1.\forall X2.\forall X3.(m1\_glib\_000\ X3\ X0)\Rightarrow(((((\neg v1\_xboole\_0\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k6\_glib\_000\ X0))))\wedge(r1\_tarski\ X2\ (k21\_glib\_000\ X0\ X1)))\Rightarrow((m2\_glib\_000\ X3\ X0\ X1\ X2)\Leftrightarrow((k24\_glib\_000\ X0\ X3 = X1)\wedge(k25\_glib\_000\ X0\ X3 = X2))))\wedge((\neg((\neg v1\_xboole\_0\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k6\_glib\_000\ X0))))\wedge(r1\_tarski\ X2\ (k21\_glib\_000\ X0\ X1)))\Rightarrow((m2\_glib\_000\ X3\ X0\ X1\ X2)\Leftrightarrow(r5\_glib\_000\ X3\ X0))))) \tag{29}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Leftrightarrow (X0 \in k4\_ordinal1) \tag{30}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0\ X0) \wedge (v1\_xxreal\_0\ X1)) \Rightarrow ((r1\_xxreal\_0\ X0\ X1) \vee (r1\_xxreal\_0\ X1\ X0)) \tag{31}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0\ X0) \wedge (v1\_xcmplx\_0\ X1)) \Rightarrow (k2\_xcmplx\_0\ X0\ X1 = k2\_xcmplx\_0\ X1\ X0) \tag{32}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0) \wedge (m1\_subset\_1\ X1\ k5\_numbers)) \Rightarrow (k1\_nat\_1\ X0\ X1 = k1\_nat\_1\ X1\ X0) \tag{33}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ k1\_numbers)) \Rightarrow (v3\_membered\ X0) \tag{34}$$

Assume the following.

$$\forall X0.((v3\_ordinal1\ X0) \wedge (v1\_finset\_1\ X0)) \Rightarrow (v7\_ordinal1\ X0) \tag{35}$$

Assume the following.

$$\forall X0.(v3\_membered\ X0) \Rightarrow (v1\_membered\ X0) \tag{36}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (v1\_xxreal\_0\ X0) \tag{37}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (v1\_xreal\_0\ X0) \tag{38}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow ((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finset\_1\ X0))) \tag{39}$$

Assume the following.

$$\forall X0.(v1\_card\_1\ X0) \Rightarrow (v3\_ordinal1\ X0) \tag{40}$$

Assume the following.

$$\forall X0.(v6\_membered\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ X0) \Rightarrow (v7\_ordinal1\ X1)) \tag{41}$$

Assume the following.

$$\forall X0.(v1\_membered\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ X0) \Rightarrow (v1\_xcmplx\_0\ X1)) \tag{42}$$

Theorem 1

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v4\_relat\_1\ X0\ k5\_numbers)\wedge((v1\_funct\_1\ X0)\wedge((v1\_finset\_1\ X0)\wedge(v1\_glib\_000\ X0)))))\Rightarrow(\forall X1.((\neg\ v1\_xboole\_0\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k6\_glib\_000\ X0))))\Rightarrow(\forall X2.(m2\_glib\_000\ X2\ X0\ X1\ (k21\_glib\_000\ X0\ X1))\Rightarrow(\forall X3.(m3\_glib\_001\ X3\ X2)\Rightarrow((v1\_chord\ X3\ X2)\Rightarrow(\forall X4.((v7\_ordinal1\ X4)\wedge(\neg v1\_abian\ X4))\Rightarrow(\forall X5.((v7\_ordinal1\ X5)\wedge(\neg v1\_abian\ X5))\Rightarrow((r1\_xxreal\_0\ X5\ (k3\_finseq\_1\ X3))\Rightarrow((r1\_xxreal\_0\ X5\ (k1\_nat\_1\ X4\ np\_\_2))\vee(\forall X6.\neg r1\_glib\_000\ X0\ (k1\_funct\_1\ X3\ X4)\ (k1\_funct\_1\ X3\ X5)\ X6)))))))))$$