t8_jordan4 (TMNtu-jtY44EkwdZumBMBuKKUnxK3gQxgsNZ)

October 27, 2020

Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np\_\_1 : \iota$ be given. Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k3\_finseq\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $k1\_card\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $v1\_card\_1 : \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m2\_finseq\_1\ X1\ X0) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ k5\_numbers) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ k5\_numbers) \Rightarrow (((r1\_xxreal\_0\ np\_\_1\ X2) \wedge ((r1\_xxreal\_0\ X2\ (k3\_finseq\_1\ X1)) \wedge ((r1\_xxreal\_0\ np\_\_1\ X3) \wedge (r1\_xxreal\_0\ X3\ (k3\_finseq\_1\ X1))))) \Rightarrow ((k1\_funct\_1\ (k3\_finseq\_6\ X0\ X1\ X2\ X3)\ np\_\_1 = k1\_funct\_1\ X1\ X2) \wedge (((r1\_xxreal\_0\ X2\ X3) \Rightarrow ((k3\_finseq\_1\ (k3\_finseq\_6\ X0\ X1\ X2\ X3) = k2\_nat\_1\ (k7\_nat\_d\ X3\ X2)\ np\_\_1) \wedge (\forall X4.(m1\_subset\_1\ X4\ k5\_numbers) \Rightarrow (((r1\_xxreal\_0\ np\_\_1\ X4) \wedge (r1\_xxreal\_0\ X4\ (k3\_finseq\_1\ (k3\_finseq\_6\ X0\ X1\ X2\ X3)))) \Rightarrow (k1\_funct\_1\ (k3\_finseq\_6\ X0\ X1\ X2\ X3)\ X4 = k1\_funct\_1\ X1\ (k7\_nat\_d\ (k2\_nat\_1\ X4\ X2)\ np\_\_1)))))) \wedge ((\neg r1\_xxreal\_0\ X2\ X3) \Rightarrow ((k3\_finseq\_1\ (k3\_finseq\_6\ X0\ X1\ X2\ X3) = k2\_nat\_1\ (k7\_nat\_d\ X2\ X3)\ np\_\_1) \wedge (\forall X4.(m1\_subset\_1\ X4\ k5\_numbers) \Rightarrow (((r1\_xxreal\_0\ np\_\_1\ X4) \wedge (r1\_xxreal\_0\ X4\ (k3\_finseq\_1\ (k3\_finseq\_6\ X0\ X1\ X2\ X3)))) \Rightarrow (k1\_funct\_1\ (k3\_finseq\_6\ X0\ X1\ X2\ X3)\ X4 = k1\_funct\_1\ X1\ (k2\_nat\_1\ (k7\_nat\_d\ X2\ X4)\ np\_\_1)))))))))))) \tag{2}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_1)\wedge(m2\_subset\_1\ np\_\_1\ k1\_numbers\ k5\_numbers))\wedge((m1\_subset\_1\ np\_\_1\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_1\ k1\_numbers)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0)\Leftrightarrow(m1\_finseq\_1\ X1\ X0) \tag{4}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{5}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow(k3\_finseq\_1\ X0 = k1\_card\_1\ X0) \tag{6}$$

Assume the following.

$$\forall X0.(v1\_finset\_1\ X0)\Rightarrow((v1\_finset\_1\ (k1\_card\_1\ X0))\wedge(v1\_card\_1\ (k1\_card\_1\ X0))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0)\Rightarrow((v1\_funct\_1\ X1)\wedge((v1\_finseq\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ X0))))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1))) \tag{9}$$

Assume the following.

$$\forall X0.v1\_card\_1\ (k1\_card\_1\ X0) \tag{10}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \tag{11}$$

Assume the following.

$$\forall X0.((v3\_ordinal1\ X0)\wedge(v1\_finset\_1\ X0))\Rightarrow(v7\_ordinal1\ X0) \tag{12}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(v1\_xxreal\_0\ X0) \tag{13}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finset\_1\ X0))) \tag{14}$$

Assume the following.

$$\forall X0.(v1\_card\_1\ X0)\Rightarrow(v3\_ordinal1\ X0) \tag{15}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m2\_finseq\_1\ X1\ X0)\Rightarrow (\forall X2.(m1\_subset\_1\ X2\ k5\_numbers)\Rightarrow(\forall X3.(m1\_subset\_1\ X3\ k5\_numbers)\Rightarrow(((r1\_xxreal\_0\ np\_\_1\ X3)\wedge((r1\_xxreal\_0\ X3\ X2)\wedge (r1\_xxreal\_0\ X2\ (k3\_finseq\_1\ X1))))\Rightarrow(k3\_finseq\_1\ (k3\_finseq\_6\ X0\ X1\ X3\ X2) = k2\_nat\_1\ (k7\_nat\_d\ X2\ X3)\ np\_\_1)))))$$