

t2\_gobrd10  
(TMKNmQ5mkssDum4nV34Tgg7Wr6ez7dRp4nB)

October 27, 2020

Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $r1\_gobrd10 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $k7\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k4\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xreal\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k4\_ordinal1 : \iota$  be given. Let  $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (k4\_card\_1 X0 = k1\_nat\_1 X0 np\_1) \quad (1)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow (k7\_nat\_d (k2\_xcmplx\_0 X0 X1) X1 = X0)) \quad (2)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 X1 X0) \Rightarrow (k2\_xcmplx\_0 (k1\_xreal\_0 X0 X1) X1 = X0))) \quad (3)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1 X0) \wedge (v7\_ordinal1 X1)) \Rightarrow (k7\_nat\_d X0 X1 = k1\_xreal\_0 X0 X1) \quad (5)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1 X0 k5\_numbers)\wedge(v7\_ordinal1 X1))\Rightarrow(k2\_nat\_1 X0 X1 = k2\_xcmplx\_0 X0 X1) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1 X0)\wedge(m1\_subset\_1 X1 k5\_numbers))\Rightarrow(k1\_nat\_1 X0 X1 = k2\_xcmplx\_0 X0 X1) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1 X0)\wedge(v7\_ordinal1 X1))\Rightarrow(m1\_subset\_1 (k7\_nat\_d X0 X1) k5\_numbers) \quad (9)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k5\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1 X1 k5\_numbers)\Rightarrow((r1\_gobrd10 X0 X1)\Leftrightarrow((X1 = k2\_nat\_1 X0 np\_1)\vee(X0 = k2\_nat\_1 X1 np\_1)))) \quad (10)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1)\Rightarrow(v7\_ordinal1 X0) \quad (11)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(v1\_xreal\_0 X0) \quad (12)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers)\Rightarrow(v1\_xreal\_0 X0) \quad (13)$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1 X0 k5\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1 X1 k5\_numbers)\Rightarrow(((r1\_gobrd10 X0 X1)\wedge((r1\_xxreal\_0 np\_1 X0)\wedge(r1\_xxreal\_0 np\_1 X1)))\Rightarrow(r1\_gobrd10 (k7\_nat\_d X0 np\_1) (k7\_nat\_d X1 np\_1))))$$