

## t55\_seq\_4

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_numbers : \iota$  be given. Let  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_seq\_4 : \iota \Rightarrow \iota$  be given. Let  $k5\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_partfun1 : \iota \Rightarrow \iota$  be given. Let  $k4\_relat\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k10\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k29\_binop\_2 : \iota$  be given. Let  $v1\_membered : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. k6\_partfun1\ X0 = k4\_relat\_1\ X0 \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. ((\neg v1\_xboole\_0 \\ & X0) \wedge (((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ (k2\_zfmisc\_1\ X0\ X0)\ X0) \wedge \\ & (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0) \\ & X0)))))) \wedge ((m1\_subset\_1\ X3\ X0) \wedge ((v1\_funct\_1\ X4) \wedge ((v1\_funct\_2 \\ & X4\ X1\ X0) \wedge (m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X1\ X0))))))))) \Rightarrow \\ & (k10\_funcop\_1\ X0\ X1\ X2\ X3\ X4 = k5\_funcop\_1\ X2\ X3\ X4) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1\_subset\_1\ X0\ k2\_numbers) \Rightarrow (\forall X1. (m1\_subset\_1 \\ & X1\ k2\_numbers) \Rightarrow (k3\_funct\_2\ k2\_numbers\ k2\_numbers\ (k10\_funcop\_1 \\ & k2\_numbers\ k2\_numbers\ k29\_binop\_2\ X0\ (k6\_partfun1\ k2\_numbers)) \\ & X1 = k5\_binop\_2\ X0\ X1)) \end{aligned} \quad (3)$$

Assume the following.

$$\neg v1\_xboole\_0\ k2\_numbers \quad (4)$$

Assume the following.

$$v1\_membered\ k2\_numbers \quad (5)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 (k4\_relat\_1 X0)) \wedge ((v4\_relat\_1 (k4\_relat\_1 X0) X0) \wedge ((v1\_funct\_1 (k4\_relat\_1 X0)) \wedge (v1\_partfun1 (k4\_relat\_1 X0) X0))) \quad (6)$$

Assume the following.

$$\forall X0.(v1\_partfun1 (k6\_partfun1 X0) X0) \wedge (m1\_subset\_1 (k6\_partfun1 X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0) X0)) \quad (7)$$

Assume the following.

$$(v1\_funct\_1 k29\_binop\_2) \wedge ((v1\_funct\_2 k29\_binop\_2 (k2\_zfmisc\_1 k2\_numbers k2\_numbers) k2\_numbers) \wedge (m1\_subset\_1 k29\_binop\_2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 k2\_numbers k2\_numbers) k2\_numbers)))) \quad (8)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k7\_seq\_4 X0 = k5\_funcop\_1 k29\_binop\_2 X0 (k6\_partfun1 k2\_numbers)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0) X1)) \Rightarrow ((v1\_partfun1 X2 X0) \Rightarrow (v1\_funct\_2 X2 X0 X1)) \quad (10)$$

Assume the following.

$$\forall X0.(v1\_membered X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 X0) \Rightarrow (v1\_xcmplx\_0 X1)) \quad (11)$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1 X0 k2\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 X1 k2\_numbers) \Rightarrow (k3\_funct\_2 k2\_numbers k2\_numbers (k7\_seq\_4 X0) X1 = k5\_binop\_2 X0 X1))$$