

## t54\_finseq\_2

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Let  $v7\_ordinal1 : \iota \Rightarrow o$  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  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_finseq\_2 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_relat\_1 : \iota \Rightarrow \iota$  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  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_partfun1 : \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Assume the following.

$$\forall X0.(v7\_ordinal1 X0) \Rightarrow (\forall X1.(v7\_ordinal1 X1) \Rightarrow ((r1\_xxreal\_0 X0 X1) \Leftrightarrow (r1\_tarski (k2\_finseq\_1 X0) (k2\_finseq\_1 X1)))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(v1\_relat\_1 X1) \Rightarrow ((r1\_tarski (k9\_xtuple\_0 X1) X0) \Rightarrow (k3\_relat\_1 (k4\_relat\_1 X0) X1 = X1)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2.(m2\_subset\_1 X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \quad (3)$$

Assume the following.

$$\forall X0.k6\_partfun1 X0 = k4\_relat\_1 X0 \quad (4)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (5)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1) \wedge (v3\_ordinal1 k4\_ordinal1) \quad (6)$$

Assume the following.

$$m1\_subset\_1 \ k5\_numbers \ (k1\_zfmisc\_1 \ k1\_numbers) \quad (7)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 \ X0) \wedge ((v1\_funct\_1 \ X0) \wedge (v1\_finseq\_1 \ X0))) \Rightarrow \\ (m2\_subset\_1 \ (k3\_finseq\_1 \ X0) \ k1\_numbers \ k5\_numbers) \quad (8)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 \ X0) \wedge ((v1\_funct\_1 \ X0) \wedge (v1\_finseq\_1 \ X0))) \Rightarrow \\ (\forall X1.(m2\_subset\_1 \ X1 \ k1\_numbers \ k5\_numbers) \Rightarrow ((X1 = k3\_finseq\_1 \\ X0) \Leftrightarrow (k2\_finseq\_1 \ X1 = k9\_xtuple\_0 \ X0))) \quad (9)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 \ X0) \Rightarrow (k1\_finseq\_2 \ X0 = k6\_partfun1 \ (k2\_finseq\_1 \\ X0)) \quad (10)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v1\_xboole\_0 \ X0) \Rightarrow (\forall X1.(m1\_subset\_1 \ X1 \ (k1\_zfmisc\_1 \\ X0)) \Rightarrow (v1\_xboole\_0 \ X1)) \quad (12)$$

**Theorem 1**

$$\forall X0.(v7\_ordinal1 \ X0) \Rightarrow (\forall X1.((v1\_relat\_1 \ X1) \wedge (( \\ v1\_funct\_1 \ X1) \wedge (v1\_finseq\_1 \ X1))) \Rightarrow ((r1\_xxreal\_0 \ (k3\_finseq\_1 \\ X1) \ X0) \Rightarrow (k3\_relat\_1 \ (k1\_finseq\_2 \ X0) \ X1 = X1)))$$