

t3\_gr\_cy\_1  
(TMEurLga4Ja7Mv51S6SG4s1UHpu1t5PjffK)

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Let  $k1\_gr\_cy\_1 : \iota \Rightarrow \iota$  be given. Let  $k6\_finseq\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_numbers : \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k4\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k44\_binop\_2 : \iota$  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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_setwiseo : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_finsop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$k4\_binop\_1 \ k4\_numbers \ k44\_binop\_2 = k6\_numbers \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1\_xboole\_0 \ X0) \Rightarrow (\forall X1. ((v1\_funct\_1 \ X1) \wedge ( \\ & (v1\_funct\_2 \ X1 \ (k2\_zfmisc\_1 \ X0 \ X0) \ X0) \wedge (m1\_subset\_1 \ X1 \ (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 \ (k2\_zfmisc\_1 \ X0 \ X0) \ X0)))) \Rightarrow ((v1\_setwiseo \ X1 \ X0) \Rightarrow \\ & (k1\_finsop\_1 \ X0 \ (k6\_finseq\_1 \ X0) \ X1 = k4\_binop\_1 \ X0 \ X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\neg v1\_xboole\_0 \ k4\_numbers \quad (3)$$

Assume the following.

$$\begin{aligned} & (v1\_funct\_1 \ k44\_binop\_2) \wedge ((v1\_funct\_2 \ k44\_binop\_2 \ (k2\_zfmisc\_1 \\ & k4\_numbers \ k4\_numbers) \ k4\_numbers) \wedge (v1\_setwiseo \ k44\_binop\_2 \\ & k4\_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\forall X0. m2\_finseq\_1 \ (k6\_finseq\_1 \ X0) \ X0 \quad (5)$$

Assume the following.

$$\begin{aligned} & (v1\_funct\_1 \ k44\_binop\_2) \wedge ((v1\_funct\_2 \ k44\_binop\_2 \ (k2\_zfmisc\_1 \\ & k4\_numbers \ k4\_numbers) \ k4\_numbers) \wedge (m1\_subset\_1 \ k44\_binop\_2 \\ & (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ (k2\_zfmisc\_1 \ k4\_numbers \ k4\_numbers) \\ & k4\_numbers)))) \end{aligned} \quad (6)$$

Assume the following.

$$\forall X0.(m2\_finseq\_1 X0 k4\_numbers) \Rightarrow (k1\_gr\_cy\_1 X0 = k1\_finsop\_1 \quad (7) \\ k4\_numbers X0 k44\_binop\_2)$$

**Theorem 1**  $k1\_gr\_cy\_1 (k6\_finseq\_1 k4\_numbers) = k6\_numbers.$