

t1\_filerec1 (TMaZnDrV-  
FUeUcXR52badgJTVR9sstELF9FZ)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_finseq\_8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  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  $k7\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finseq\_1 X0))) \Rightarrow \\ & \quad (\forall X1.((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 \\ & \quad X1))) \Rightarrow (\forall X2.((v1\_relat\_1 X2) \wedge ((v1\_funct\_1 X2) \wedge (v1\_finseq\_1 \\ & \quad X2)))) \Rightarrow (k7\_finseq\_1 (k7\_finseq\_1 X0 X1) X2 = k7\_finseq\_1 X0 (k7\_finseq\_1 \\ & \quad X1 X2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. (m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1\_finseq\_1 X1 X0) \wedge (m1\_finseq\_1 X2 X0)) \Rightarrow (k1\_finseq\_8 X0 X1 X2 = k7\_finseq\_1 X1 X2) \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. (m1\_finseq\_1 X1 X0) \Rightarrow ((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1))) \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((m1\_finseq\_1 X1 X0) \wedge (m1\_finseq\_1 X2 X0)) \Rightarrow (m2\_finseq\_1 (k1\_finseq\_8 X0 X1 X2) X0) \tag{5}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m2\_finseq\_1 X1 X0) \Rightarrow \\ & (\forall X2.(m2\_finseq\_1 X2 X0) \Rightarrow (\forall X3.(m2\_finseq\_1 X3 X0) \Rightarrow \\ & (\forall X4.(m2\_finseq\_1 X4 X0) \Rightarrow ((k1\_finseq\_8 X0 (k1\_finseq\_8 \\ & X0 (k1\_finseq\_8 X0 X1 X2) X3) X4 = k1\_finseq\_8 X0 (k1\_finseq\_8 X0 X1 \\ & (k1\_finseq\_8 X0 X2 X3)) X4) \wedge ((k1\_finseq\_8 X0 (k1\_finseq\_8 X0 (k1\_finseq\_8 \\ & X0 X1 X2) X3) X4 = k1\_finseq\_8 X0 (k1\_finseq\_8 X0 X1 X2) (k1\_finseq\_8 \\ & X0 X3 X4)) \wedge (k1\_finseq\_8 X0 (k1\_finseq\_8 X0 X1 (k1\_finseq\_8 X0 X2 \\ & X3)) X4 = k1\_finseq\_8 X0 (k1\_finseq\_8 X0 X1 X2) (k1\_finseq\_8 X0 X3 \\ & X4)))))))) \end{aligned}$$