t15_filerec1 (TMdAYaHSwLbyHRjjcjPNczSDRczK9ab2pid)

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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 $k11\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_rfinseq : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k10\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_finseq\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_finseq\_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ X0) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ X0) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ X0) \Rightarrow (k2\_rfinseq\ X0\ np\_\_1\ (k3\_finseq\_4\ X0\ X1\ X2\ X3) = k2\_finseq\_4\ X0\ X2\ X3)))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1\ X0\ X1) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(\neg v1\_xboole\_0\ X3) \Rightarrow (\forall X4.(m2\_finseq\_1\ X4\ X3) \Rightarrow ((X4 = k11\_finseq\_1\ X0\ X1\ X2) \Rightarrow ((X0 \in X3) \wedge ((X1 \in X3) \wedge (X2 \in X3))))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0\ X0) \wedge ((m1\_subset\_1\ X1\ X0) \wedge ((m1\_subset\_1\ X2\ X0) \wedge (m1\_subset\_1\ X3\ X0)))) \Rightarrow (k3\_finseq\_4\ X0\ X1\ X2\ X3 = k11\_finseq\_1\ X1\ X2\ X3) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X0) \wedge ((m1\_subset\_1\ X1\ X0) \wedge (m1\_subset\_1\ X2\ X0))) \Rightarrow (k2\_finseq\_4\ X0\ X1\ X2 = k10\_finseq\_1\ X1\ X2) \tag{5}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.\forall X3.(\neg v1\_xboole\_0\ X3)\Rightarrow$$
$$(\forall X4.(m2\_finseq\_1\ X4\ X3)\Rightarrow((X4 = k11\_finseq\_1\ X0\ X1\ X2)\Rightarrow($$
$$k2\_rfinseq\ X3\ np\_\_1\ X4 = k10\_finseq\_1\ X1\ X2)))$$