t29_filerec1 (TM-FoV6nZLLhfn7LgxmYCVVfDkUEXJuhY5EJ)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r5\_finseq\_8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_numbers : \iota$ be given. Let $k3\_finseq\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $r4\_finseq\_8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8\_finseq\_8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m2\_finseq\_1\ X1\ X0) \Rightarrow (\forall X2.(m2\_finseq\_1\ X2\ X0) \Rightarrow (((\neg r1\_xxreal\_0\ (k3\_finseq\_1\ X2)\ k6\_numbers) \Rightarrow ((r1\_xxreal\_0\ (k3\_finseq\_1\ X2)\ (k3\_finseq\_1\ X1)) \wedge (k3\_finseq\_6\ X0\ X1\ (k7\_nat\_d\ (k2\_nat\_1\ (k3\_finseq\_1\ X1)\ np\_\_1)\ (k3\_finseq\_1\ X2))\ (k3\_finseq\_1\ X1) = X2))) \Rightarrow (r4\_finseq\_8\ X0\ X1\ X2))))) \tag{1}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m2\_finseq\_1\ X1\ X0) \Rightarrow (\forall X2.(m2\_finseq\_1\ X2\ X0) \Rightarrow ((r4\_finseq\_8\ X0\ X1\ X2) \Rightarrow (r1\_xxreal\_0\ (k3\_finseq\_1\ X2)\ (k3\_finseq\_1\ X1))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0) \Leftrightarrow (m1\_finseq\_1\ X1\ X0) \tag{3}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m2\_finseq\_1\ X1\ X0) \Rightarrow (\forall X2.(m2\_finseq\_1\ X2\ X0) \Rightarrow ((r5\_finseq\_8\ X0\ X1\ X2) \Leftrightarrow ((\neg r1\_xxreal\_0\ (k3\_finseq\_1\ X2)\ k6\_numbers) \Rightarrow ((r1\_xxreal\_0\ (k3\_finseq\_1\ X2)\ (k3\_finseq\_1\ X1)) \wedge (k8\_finseq\_8\ X0\ X1\ X2\ np\_\_1 = k7\_nat\_d\ (k2\_nat\_1\ (k3\_finseq\_1\ X1)\ np\_\_1)\ (k3\_finseq\_1\ X2))))))) \tag{4}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow (\forall X2.(m1\_finseq\_1\ X2\ X0)\Rightarrow((r5\_finseq\_8\ X0\ X1\ X2)\Rightarrow(r1\_xxreal\_0\ (k3\_finseq\_1\ X2)\ (k3\_finseq\_1\ X1)))))$$