

t33\_pnproc\_1  
(TMSSvZF3aQQHVBbryvBZnAWUWpwVADdi5fo)

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Let  $m2\_pnproc.1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k8\_pnproc.1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_pre\_poly : \iota \Rightarrow \iota$  be given. Let  $k6\_partfun1 : \iota \Rightarrow \iota$  be given. Let  $k9\_funct.2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v1\_xboole.0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole.0 : \iota$  be given. Let  $k4\_funct.7 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_finseq.2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_finseq.2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset.1 : \iota \Rightarrow \iota \Rightarrow o$  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  $k3\_finseq.1 : \iota \Rightarrow \iota$  be given. Let  $k1\_card.1 : \iota \Rightarrow \iota$  be given. Let  $v1\_card.1 : \iota \Rightarrow o$  be given. Let  $k3\_finseq.2 : \iota \Rightarrow \iota$  be given. Let  $v1\_funcop.1 : \iota \Rightarrow o$  be given. Let  $k4\_finseq.1 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_pnproc.1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(v1\_xboole.0 X0) \Rightarrow (X0 = k1\_xboole.0) \quad (1)$$

Assume the following.

$$\forall X0.k4\_funct.7 X0 k1\_xboole.0 = k6\_partfun1 X0 \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq.2 X1 X0) \Rightarrow (\forall X2.(m2\_finseq.2 X2 X0 X1) \Leftrightarrow (m1\_subset.1 X2 X1)) \quad (3)$$

Assume the following.

$$\forall X0.((v1\_relat.1 X0) \wedge ((v1\_funct.1 X0) \wedge (v1\_finseq.1 X0))) \Rightarrow (k3\_finseq.1 X0 = k1\_card.1 X0) \quad (4)$$

Assume the following.

$$\forall X0.(\neg v1\_xboole.0 X0) \Rightarrow ((\neg v1\_xboole.0 (k1\_card.1 X0)) \wedge (v1\_card.1 (k1\_card.1 X0))) \quad (5)$$

Assume the following.

$$\forall X0.(v1\_xboole.0 X0) \Rightarrow ((v1\_xboole.0 (k1\_card.1 X0)) \wedge (v1\_card.1 (k1\_card.1 X0))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m2\_pnproc\_1 X1 X0)\wedge(m1\_subset\_1 X2 (k3\_finseq\_2 X1)))\Rightarrow((v1\_relat\_1 (k8\_pnproc\_1 X0 X1 X2))\wedge(v1\_funct\_1 (k8\_pnproc\_1 X0 X1 X2))) \quad (7)$$

Assume the following.

$$\forall X0.m1\_finseq\_2 (k3\_finseq\_2 X0) X0 \quad (8)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 (k2\_pre\_poly X0))\wedge(m2\_finseq\_2 (k2\_pre\_poly X0) X0 (k3\_finseq\_2 X0)) \quad (9)$$

Assume the following.

$$\begin{aligned} &\forall X0.\forall X1.(m2\_pnproc\_1 X1 X0)\Rightarrow(\forall X2.(m2\_finseq\_2 \\ &X2 X1 (k3\_finseq\_2 X1))\Rightarrow(\forall X3.((v1\_relat\_1 X3)\wedge(v1\_funct\_1 \\ &X3))\Rightarrow((X3 = k8\_pnproc\_1 X0 X1 X2)\Leftrightarrow(\exists X4.((v1\_relat\_1 X4)\wedge \\ &((v1\_funct\_1 X4)\wedge((v1\_funcop\_1 X4)\wedge(v1\_finseq\_1 X4))))\wedge((X3 = \\ &k4\_funct\_7 (k9\_funct\_2 X0 k5\_numbers) X4)\wedge((k3\_finseq\_1 X4 = k3\_finseq\_1 \\ &X2)\wedge(\forall X5.(m1\_subset\_1 X5 k5\_numbers)\Rightarrow((X5 \in k4\_finseq\_1 \\ &X2)\Rightarrow(k1\_funct\_1 X4 X5 = k7\_pnproc\_1 X0 (k7\_partfun1 X1 X2 X5)))))))))) \quad (10) \end{aligned}$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge(v1\_xboole\_0 X0))\Rightarrow((v1\_relat\_1 X0)\wedge(v1\_finseq\_1 X0)) \quad (11)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0)\Rightarrow(v1\_relat\_1 X0) \quad (12)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0)\Rightarrow(v1\_funct\_1 X0) \quad (13)$$

**Theorem 1**

$$\forall X0.\forall X1.(m2\_pnproc\_1 X1 X0)\Rightarrow(k8\_pnproc\_1 X0 X1 (k2\_pre\_poly X1) = k6\_partfun1 (k9\_funct\_2 X0 k5\_numbers))$$