t9_pre_poly (TMMkFRF-fEPL7HERHdADM1BRo7H8VD82QPNz)

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Let $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_relat\_2 : \iota \Rightarrow o$ be given. Let $v4\_relat\_2 : \iota \Rightarrow o$ be given. Let $v8\_relat\_2 : \iota \Rightarrow o$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k4\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_pre\_poly : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $r4\_relat\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_relat\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $k1\_relat\_1 : \iota \Rightarrow \iota$ be given. Let $r8\_relat\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $r3\_orders\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r6\_relat\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.(v1\_relat\_1\ X2) \Rightarrow (((r4\_relat\_2\ X2\ X0) \wedge (r1\_tarski\ X1\ X0)) \Rightarrow (r4\_relat\_2\ X2\ X1)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(v1\_relat\_1\ X2) \Rightarrow (((r1\_relat\_2\ X2\ X0) \wedge (r1\_tarski\ X1\ X0)) \Rightarrow (r1\_relat\_2\ X2\ X1)) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1)) \Leftrightarrow (r1\_tarski\ X0\ X1) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xxreal\_0\ X1) \Rightarrow (((r1\_xxreal\_0\ X0\ X1) \wedge (r1\_xxreal\_0\ X1\ X0)) \Rightarrow (X0 = X1))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_partfun1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))))\Rightarrow(k1\_relat\_1\ X1 = X0) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(v1\_relat\_1\ X2)\Rightarrow(((r8\_relat\_2\ X2\ X0)\wedge(r1\_tarski\ X1\ X0))\Rightarrow(r8\_relat\_2\ X2\ X1)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1)))\Rightarrow(\neg(X0 \in k10\_xtuple\_0\ X1)\wedge(\forall X2.(v7\_ordinal1\ X2)\Rightarrow(\neg(X2 \in k4\_finseq\_1\ X1)\wedge(k1\_funct\_1\ X1\ X2 = X0)))) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0)\Leftrightarrow(m1\_finseq\_1\ X1\ X0) \tag{8}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow(k4\_finseq\_1\ X0 = k9\_xtuple\_0\ X0) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge(v5\_relat\_1\ X1\ X0))\Rightarrow(k2\_relset\_1\ X0\ X1 = k10\_xtuple\_0\ X1) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0)\Rightarrow((v1\_funct\_1\ X1)\wedge((v1\_finseq\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ X0))))) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1))) \tag{12}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0)\Rightarrow((v1\_relat\_2\ X0)\Leftrightarrow(r1\_relat\_2\ X0\ (k1\_relat\_1\ X0))) \tag{13}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0)\Rightarrow(\forall X1.(r3\_orders\_1\ X0\ X1)\Leftrightarrow((r1\_relat\_2\ X0\ X1)\wedge((r8\_relat\_2\ X0\ X1)\wedge((r4\_relat\_2\ X0\ X1)\wedge(r6\_relat\_2\ X0\ X1))))) \tag{14}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0)\Rightarrow(\forall X1.(r6\_relat\_2\ X0\ X1)\Leftrightarrow(\forall X2.\ \forall X3.\neg(X2\in X1)\wedge((X3\in X1)\wedge((X2\neq X3)\wedge((\neg k4\_tarski\ X2\ X3\in X0)\wedge\ (\neg k4\_tarski\ X3\ X2\in X0))))))) \tag{15}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1)\wedge((v5\_relat\_1\ X1\ X0)\wedge(\ v1\_funct\_1\ X1)))\Rightarrow(\forall X2.(X2\in k9\_xtuple\_0\ X1)\Rightarrow(k7\_partfun1\ X0\ X1\ X2=k1\_funct\_1\ X1\ X2)) \tag{16}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_finset\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)))\Rightarrow(\forall X2.((v1\_partfun1\ X2\ X0)\wedge((v1\_relat\_2\ X2)\wedge((v4\_relat\_2\ X2)\wedge((v8\_relat\_2\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)))))))\Rightarrow((r3\_orders\_1\ X2\ X1)\Rightarrow(\forall X3.(m2\_finseq\_1\ X3\ X0)\Rightarrow((X3=k7\_pre\_poly\ X0\ X1\ X2)\Leftrightarrow((k2\_relset\_1\ X0\ X3=X1)\wedge(\forall X4.\ (v7\_ordinal1\ X4)\Rightarrow(\forall X5.(v7\_ordinal1\ X5)\Rightarrow(((X4\in k4\_finseq\_1\ X3)\wedge(X5\in k4\_finseq\_1\ X3))\Rightarrow((r1\_xxreal\_0\ X5\ X4)\vee((k7\_partfun1\ X0\ X3\ X4\neq k7\_partfun1\ X0\ X3\ X5)\wedge(k4\_tarski\ (k7\_partfun1\ X0\ X3\ X4)\ (k7\_partfun1\ X0\ X3\ X5)\in X2)))))))))) \tag{17}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0)\Rightarrow((v8\_relat\_2\ X0)\Leftrightarrow(r8\_relat\_2\ X0\ (\ k1\_relat\_1\ X0))) \tag{18}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0)\Rightarrow((v4\_relat\_2\ X0)\Leftrightarrow(r4\_relat\_2\ X0\ (\ k1\_relat\_1\ X0))) \tag{19}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0)\Rightarrow(v5\_relat\_1\ X1\ X0) \tag{20}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(v1\_xxreal\_0\ X0) \tag{21}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_relat\_1\ X2) \tag{22}$$

Theorem 1

$$\forall X0.\forall X1.((v1\_finset\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)))\Rightarrow(\forall X2.((v1\_partfun1\ X2\ X0)\wedge((v1\_relat\_2\ X2)\wedge((v4\_relat\_2\ X2)\wedge((v8\_relat\_2\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)))))))\Rightarrow(\forall X3.(m2\_finseq\_1\ X3\ X0)\Rightarrow(((k2\_relset\_1\ X0\ X3 = X1)\wedge(\forall X4.(v7\_ordinal1\ X4)\Rightarrow(\forall X5.(v7\_ordinal1\ X5)\Rightarrow(((X4 \in k4\_finseq\_1\ X3)\wedge(X5 \in k4\_finseq\_1\ X3))\Rightarrow((r1\_xxreal\_0\ X5\ X4)\vee((k7\_partfun1\ X0\ X3\ X4 \neq k7\_partfun1\ X0\ X3\ X5)\wedge(k4\_tarski\ (k7\_partfun1\ X0\ X3\ X4)\ (k7\_partfun1\ X0\ X3\ X5) \in X2)))))))\Rightarrow(X3 = k7\_pre\_poly\ X0\ X1\ X2))))$$