

## l36\_matrixc1

(TMPW49tSJajPpygDBGKPL1AjY3WrHPz5AmA)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_numbers : \iota$  be given. Let  $k9\_matrix\_5 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k29\_binop\_2 : \iota$  be given. Let  $k6\_partfun1 : \iota \Rightarrow \iota$  be given. Let  $k5\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_seq\_4 : \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_valued\_0 : \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_relat\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_membered : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 k2\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\ & X1 k2\_numbers) \Rightarrow (k3\_funct\_2 k2\_numbers k2\_numbers (k7\_seq\_4 X0) \\ & X1 = k5\_binop\_2 X0 X1)) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_valued\_0 X0))) \Rightarrow (k9\_matrix\_5 X0 X1 = k1\_funct\_1 X0 X1) \tag{2}$$

Assume the following.

$$\forall X0.k6\_partfun1 X0 = k4\_relat\_1 X0 \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0 X0) \wedge \\ & (((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1)))))) \wedge (m1\_subset\_1 X3 X0))) \Rightarrow (k3\_funct\_2 X0 \\ & X1 X2 X3 = k1\_funct\_1 X2 X3) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((\neg v1\_xboole\_0 \\ & X0)\wedge(((v1\_funct\_1 X2)\wedge((v1\_funct\_2 X2 (k2\_zfmisc\_1 X0 X0) X0)\wedge \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0) \\ & X0))))\wedge((m1\_subset\_1 X3 X0)\wedge((v1\_funct\_1 X4)\wedge((v1\_funct\_2 \\ & X4 X1 X0)\wedge(m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X1 X0))))))\Rightarrow \\ & (k10\_funcop\_1 X0 X1 X2 X3 X4 = k5\_funcop\_1 X2 X3 X4) \end{aligned} \quad (5)$$

Assume the following.

$$\neg v1\_xboole\_0 \quad k2\_numbers \quad (6)$$

Assume the following.

$$v1\_membered \quad k2\_numbers \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_relat\_1 (k4\_relat\_1 X0))\wedge((v4\_relat\_1 (k4\_relat\_1 \\ & X0) X0)\wedge((v1\_funct\_1 (k4\_relat\_1 X0))\wedge(v1\_partfun1 (k4\_relat\_1 \\ & X0) X0))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xcmplx\_0 X0)\Rightarrow((v1\_funct\_1 (k7\_seq\_4 X0))\wedge((v1\_funct\_2 \\ & (k7\_seq\_4 X0) k2\_numbers k2\_numbers)\wedge(m1\_subset\_1 (k7\_seq\_4 \\ & X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 k2\_numbers k2\_numbers)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_partfun1 (k6\_partfun1 X0) X0)\wedge(m1\_subset\_1 (k6\_partfun1 \\ & X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & (v1\_funct\_1 k29\_binop\_2)\wedge((v1\_funct\_2 k29\_binop\_2 (k2\_zfmisc\_1 \\ & k2\_numbers k2\_numbers) k2\_numbers)\wedge(m1\_subset\_1 k29\_binop\_2 \\ & (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 k2\_numbers k2\_numbers) \\ & k2\_numbers)))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xcmplx\_0 X0)\Rightarrow(k7\_seq\_4 X0 = k5\_funcop\_1 k29\_binop\_2 \\ & X0 (k6\_partfun1 k2\_numbers)) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k2\_numbers)\Rightarrow(v1\_xcmplx\_0 X0) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v1\_partfun1 X2 X0)\Rightarrow(v1\_funct\_2 X2 X0 X1)) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.(v1\_membered X1)\Rightarrow(\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_valued\_0 X2)) \quad (16)$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1 X0 k2\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1 X1 k2\_numbers)\Rightarrow(k9\_matrix\_5 (k10\_funcop\_1 k2\_numbers k2\_numbers k29\_binop\_2 X0 (k6\_partfun1 k2\_numbers)) X1 = k5\_binop\_2 X0 X1))$$