

t17\_seq\_1 (TM-  
Stk66Bb5w4W4kjj1RWUhp6WK4YfLNVaUy)

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Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k32\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k26\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_real\_1 : \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $v2\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Let  $k30\_valued\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k24\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v3\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & ((v2\_xreal\_0 \ np\_1) \wedge (m2\_subset\_1 \ np\_1 \ k1\_numbers \ k5\_numbers)) \wedge \\ & ((m1\_subset\_1 \ np\_1 \ k5\_numbers) \wedge (m1\_subset\_1 \ np\_1 \ k1\_numbers)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. (((v1\_funct\_1 \ X2) \wedge \\ & ((v1\_funct\_2 \ X2 \ X0 \ X1) \wedge (m1\_subset\_1 \ X2 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \\ & X0 \ X1)))))) \wedge ((v1\_funct\_1 \ X3) \wedge ((v1\_funct\_2 \ X3 \ X0 \ X1) \wedge (m1\_subset\_1 \\ & X3 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ X0 \ X1)))))) \Rightarrow ((r2\_funct\_2 \ X0 \ X1 \ X2 \\ & X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v3\_membered \ X1) \wedge ((v1\_funct\_1 \\ & X2) \wedge (m1\_subset\_1 \ X2 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ X0 \ X1)))))) \Rightarrow (k32\_valued\_1 \\ & X0 \ X1 \ X2 = k30\_valued\_1 \ X2) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v3\_membered\ X1)\wedge(((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\wedge(v1\_xreal\_0\ X3)))\Rightarrow(k26\_valued\_1\ X0\ X1\ X2\ X3 = k24\_valued\_1\ X2\ X3)$$
(4)

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(k1\_real\_1\ X0 = k4\_xcmplx\_0\ X0)$$
(5)

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v1\_xboole\_0\ X1)\wedge(v3\_membered\ X1))\wedge((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))))\Rightarrow((v1\_funct\_1\ (k30\_valued\_1\ X2))\wedge(v1\_partfun1\ (k30\_valued\_1\ X2)\ X0))$$
(6)

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow((v1\_xcmplx\_0\ (k4\_xcmplx\_0\ X0))\wedge(v1\_xreal\_0\ (k4\_xcmplx\_0\ X0)))$$
(7)

Assume the following.

$$v3\_membered\ k1\_numbers$$
(8)

Assume the following.

$$\neg v1\_xboole\_0\ k1\_numbers$$
(9)

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v3\_membered\ X1)\wedge((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\Rightarrow((v1\_funct\_1\ (k32\_valued\_1\ X0\ X1\ X2))\wedge(m1\_subset\_1\ (k32\_valued\_1\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers))))$$
(10)

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_valued\_0\ X0)))\Rightarrow(k30\_valued\_1\ X0 = k24\_valued\_1\ X0\ (k4\_xcmplx\_0\ np\_1))$$
(11)

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge(v3\_valued\_0\ X0))\Rightarrow((v1\_relat\_1\ X0)\wedge(v1\_valued\_0\ X0))$$
(12)

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge(v5\_relat\_1\ X0\ k1\_numbers))\Rightarrow((v1\_relat\_1\ X0)\wedge(v3\_valued\_0\ X0))$$
(13)

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v4\_relat\_1 X2 X0)\wedge(v5\_relat\_1 X2 X1)) \quad (14)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers)\Rightarrow(v1\_xreal\_0 X0) \quad (15)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v1\_partfun1 X2 X0)\Rightarrow(v1\_funct\_2 X2 X0 X1)) \quad (17)$$

**Theorem 1**

$$\forall X0.((v1\_funct\_1 X0)\wedge((v1\_funct\_2 X0 k5\_numbers k1\_numbers)\wedge(m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))\Rightarrow(r2\_funct\_2 k5\_numbers k1\_numbers (k32\_valued\_1 k5\_numbers k1\_numbers X0) (k26\_valued\_1 k5\_numbers k1\_numbers X0) (k1\_real\_1 np\_1))$$