

t8\_comptrig  
(TMdSU3snP5UB362v9So2qKJQExEGuCV1xVg)

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Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k32\_sin\_cos : \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k16\_sin\_cos : \iota$  be given. Let  $k2\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k19\_sin\_cos : \iota$  be given. Let  $k10\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k1\_real\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k4\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_xxreal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_0 : \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k31\_sin\_cos : \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v3\_valued\_0 : \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v3\_membered : \iota \Rightarrow o$  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  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\neg(X0 \in k2\_rcomp\_1 k6\_numbers k32\_sin\_cos) \wedge (r1\_xxreal\_0 (k1\_seq\_1 k16\_sin\_cos X0) k6\_numbers)) \quad (1)$$

Assume the following.

$$\begin{aligned} & (k1\_seq\_1 k19\_sin\_cos (k10\_real\_1 k32\_sin\_cos np\_2) = k6\_numbers) \wedge \\ & ((k1\_seq\_1 k16\_sin\_cos (k10\_real\_1 k32\_sin\_cos np\_2) = np\_1) \wedge \\ & ((k1\_seq\_1 k19\_sin\_cos k32\_sin\_cos = k1\_real\_1 np\_1) \wedge ((k1\_seq\_1 \\ & k16\_sin\_cos k32\_sin\_cos = k6\_numbers) \wedge ((k1\_seq\_1 k19\_sin\_cos \\ & (k7\_real\_1 k32\_sin\_cos (k10\_real\_1 k32\_sin\_cos np\_2)) = k6\_numbers) \wedge \\ & ((k1\_seq\_1 k16\_sin\_cos (k7\_real\_1 k32\_sin\_cos (k10\_real\_1 k32\_sin\_cos \\ & np\_2)) = k1\_real\_1 np\_1) \wedge ((k1\_seq\_1 k19\_sin\_cos (k8\_real\_1 \\ & np\_2 k32\_sin\_cos) = np\_1) \wedge (k1\_seq\_1 k16\_sin\_cos (k8\_real\_1 \\ & np\_2 k32\_sin\_cos) = k6\_numbers)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2. \\ (v1\_xxreal\_0 X2) \Rightarrow ((X0 \in k4\_xxreal\_1 X1 X2) \Leftrightarrow ((\neg r1\_xxreal\_0 X0 X1) \wedge \\ (\neg r1\_xxreal\_0 X2 X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_xreal\_0 X0) \Rightarrow ((k1\_seq\_1 k19\_sin\_cos k6\_numbers = \\ np\_1) \wedge ((k1\_seq\_1 k16\_sin\_cos k6\_numbers = k6\_numbers) \wedge ((k1\_seq\_1 \\ k19\_sin\_cos (k4\_xcmplx\_0 X0) = k1\_seq\_1 k19\_sin\_cos X0) \wedge (k1\_seq\_1 \\ k16\_sin\_cos (k4\_xcmplx\_0 X0) = k1\_real\_1 (k1\_seq\_1 k16\_sin\_cos \\ X0)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (\forall X2. \\ (v1\_xxreal\_0 X2) \Rightarrow ((X0 \in k1\_xxreal\_1 X1 X2) \Leftrightarrow ((r1\_xxreal\_0 X1 X0) \wedge \\ (r1\_xxreal\_0 X0 X2)))))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (( \\ (r1\_xxreal\_0 X0 X1) \wedge (r1\_xxreal\_0 X1 X0)) \Rightarrow (X0 = X1))) \end{aligned} \quad (7)$$

Assume the following.

$$(m2\_subset\_1 np\_0 k1\_numbers k5\_numbers) \wedge ((m1\_subset\_1 np\_0 \\ k5\_numbers) \wedge (m1\_subset\_1 np\_0 k1\_numbers)) \quad (8)$$

Assume the following.

$$v1\_xboole\_0 np\_0 \quad (9)$$

Assume the following.

$$r1\_xxreal\_0 np\_0 np\_0 \quad (10)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (11)$$

Assume the following.

$$k32\_sin\_cos = k31\_sin\_cos \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow ( \\ k2\_rcomp\_1 X0 X1 = k4\_xxreal\_1 X0 X1) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v3\_valued\_0 X0)))\Rightarrow(k1\_seq\_1 X0 X1 = k1\_funct\_1 X0 X1) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0)\wedge(v1\_xreal\_0 X1))\Rightarrow(k1\_rcomp\_1 X0 X1 = k1\_xxreal\_1 X0 X1) \quad (15)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v2\_valued\_0 X0)))\Rightarrow(v1\_xxreal\_0 (k1\_funct\_1 X0 X1)) \quad (16)$$

Assume the following.

$$v3\_membered k1\_numbers \quad (17)$$

Assume the following.

$$v1\_xreal\_0 k31\_sin\_cos \quad (18)$$

Assume the following.

$$(v1\_funct\_1 k16\_sin\_cos)\wedge((v1\_funct\_2 k16\_sin\_cos k1\_numbers k1\_numbers)\wedge(m1\_subset\_1 k16\_sin\_cos (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_numbers k1\_numbers)))) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 X0)\wedge(v1\_xxreal\_0 X1))\Rightarrow((r1\_xxreal\_0 X0 X1)\vee(r1\_xxreal\_0 X1 X0)) \quad (20)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge(v3\_valued\_0 X0))\Rightarrow((v1\_relat\_1 X0)\wedge(v2\_valued\_0 X0)) \quad (21)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0)\Rightarrow(v1\_xxreal\_0 X0) \quad (22)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge(v5\_relat\_1 X0 k1\_numbers))\Rightarrow((v1\_relat\_1 X0)\wedge(v3\_valued\_0 X0)) \quad (23)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v4\_relat\_1 X2 X0)\wedge(v5\_relat\_1 X2 X1)) \quad (24)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (25)$$

Assume the following.

$$\forall X0.(v3\_membered X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 X0)\Rightarrow(v1\_xreal\_0 X1)) \quad (26)$$

**Theorem 1**

$$\forall X0.(v1\_xreal\_0 X0)\Rightarrow((X0 \in k1\_rcomp\_1 k6\_numbers k32\_sin\_cos)\Rightarrow(r1\_xxreal\_0 k6\_numbers (k1\_seq\_1 k16\_sin\_cos X0)))$$