

## t36\_series\_1

(TMUYpb9ANoH2o7DHcK4bASErv3bK3aNYVoU)

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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  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_series\_1 : \iota \Rightarrow o$  be given. Let  $v2\_series\_1 : \iota \Rightarrow o$  be given. Let  $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k56\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k18\_complex1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v1\_membered : \iota \Rightarrow o$  be given. Let  $k54\_valued\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v3\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k16\_complex1 : \iota \Rightarrow \iota$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k1\_numbers) \wedge \\
 & (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\
 & (\forall X1.((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers k1\_numbers) \wedge \\
 & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))) \Rightarrow \\
 & ((r2\_funct\_2 k5\_numbers k1\_numbers X0 (k56\_valued\_1 k5\_numbers \\
 & k1\_numbers X1)) \Leftrightarrow (\forall X2.(m2\_subset\_1 X2 k1\_numbers k5\_numbers) \Rightarrow \\
 & (k1\_seq\_1 X0 X2 = k18\_complex1 (k1\_seq\_1 X1 X2))))))
 \end{aligned} \tag{1}$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge((\neg v1\_xboole\_0 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))))\Rightarrow(\forall X2.(m2\_subset\_1 X2 X0 X1)\Leftrightarrow(m1\_subset\_1 X2 X1)) \quad (3)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (4)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_membered X1)\wedge((v1\_funct\_1 X2)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))))\Rightarrow(k56\_valued\_1 X0 X1 X2 = k54\_valued\_1 X2) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0 X0)\wedge(((v1\_funct\_1 X2)\wedge((v1\_funct\_2 X2 X0 X1)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))))\wedge(m1\_subset\_1 X3 X0)))\Rightarrow(k3\_funct\_2 X0 X1 X2 X3 = k1\_funct\_1 X2 X3) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v3\_valued\_0 X0)))\Rightarrow(k1\_seq\_1 X0 X1 = k1\_funct\_1 X0 X1) \quad (8)$$

Assume the following.

$$\forall X0.(v1\_xcplx\_0 X0)\Rightarrow(k18\_complex1 X0 = k16\_complex1 X0) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v1\_xboole\_0 X1)\wedge(v1\_membered X1))\wedge((v1\_funct\_1 X2)\wedge((v1\_funct\_2 X2 X0 X1)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))))\Rightarrow((v1\_funct\_1 (k54\_valued\_1 X2))\wedge(v1\_partfun1 (k54\_valued\_1 X2) X0)) \quad (10)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1)\wedge(v3\_ordinal1 k4\_ordinal1) \quad (11)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v3\_valued\_0 X0)))\Rightarrow(v1\_xreal\_0 (k1\_funct\_1 X0 X1)) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_valued\_0 X0)))\Rightarrow(v1\_xcmplx\_0 (k1\_funct\_1 X0 X1)) \quad (13)$$

Assume the following.

$$v3\_membered k1\_numbers \quad (14)$$

Assume the following.

$$\neg v1\_xboole\_0 k1\_numbers \quad (15)$$

Assume the following.

$$m1\_subset\_1 k5\_numbers (k1\_zfmisc\_1 k1\_numbers) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_membered X1)\wedge((v1\_funct\_1 X2)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))))\Rightarrow((v1\_funct\_1 (k56\_valued\_1 X0 X1 X2))\wedge(m1\_subset\_1 (k56\_valued\_1 X0 X1 X2) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k1\_numbers)))) \quad (17)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v1\_valued\_0 X0)))\Rightarrow((v1\_relat\_1 (k54\_valued\_1 X0))\wedge((v1\_funct\_1 (k54\_valued\_1 X0))\wedge(v3\_valued\_0 (k54\_valued\_1 X0)))) \quad (18)$$

Assume the following.

$$\forall X0.((v1\_funct\_1 X0)\wedge((v1\_funct\_2 X0 k5\_numbers k1\_numbers)\wedge(m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers)))))\Rightarrow((v2\_series\_1 X0)\Leftrightarrow(v1\_series\_1 (k56\_valued\_1 k5\_numbers k1\_numbers X0))) \quad (19)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0)\Rightarrow(((r1\_xxreal\_0 k6\_numbers X0)\Rightarrow(k16\_complex1 X0 = X0))\wedge((\neg r1\_xxreal\_0 k6\_numbers X0)\Rightarrow(k16\_complex1 X0 = k4\_xcmplx\_0 X0))) \quad (20)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v3\_membered X0)\Rightarrow(v1\_membered X0) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (23)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v1\_partfun1 X2 X0)\Rightarrow(v1\_funct\_2 X2 X0 X1)) \quad (24)$$

Assume the following.

$$\forall X0.\forall X1.(v3\_membered X1)\Rightarrow(\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v3\_valued\_0 X2)) \quad (25)$$

**Theorem 1**

$$\begin{aligned} &\forall X0.((v1\_funct\_1 X0)\wedge((v1\_funct\_2 X0 k5\_numbers k1\_numbers)\wedge \\ &(m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k1\_numbers))))))\Rightarrow \\ &(((\forall X1.(m2\_subset\_1 X1 k1\_numbers k5\_numbers)\Rightarrow(r1\_xxreal\_0 \\ &k6\_numbers (k3\_funct\_2 k5\_numbers k1\_numbers X0 X1)))\wedge(v1\_series\_1 \\ &X0))\Rightarrow(v2\_series\_1 X0)) \end{aligned}$$