

## t27\_comseq\_3

(TMY8sauyrFkmU4uZMhojWyhk7pJR6wJWMsF)

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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  $k2\_numbers : \iota$  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  $k1\_series\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_comseq\_3 : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_membered : \iota \Rightarrow o$  be given. Let  $v7\_membered : \iota \Rightarrow o$  be given. Let  $k1\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_series\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v1\_xboole\_0 X0) \wedge ((v1\_membered X0) \wedge (v7\_membered \\
 & \quad X0))) \Rightarrow (\forall X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers \\
 & X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers X0)))))) \Rightarrow \\
 & \quad (\forall X2. ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers X0) \wedge \\
 & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers X0)))))) \Rightarrow \\
 & \quad (k1\_valued\_1 (k2\_series\_1 X1) (k2\_series\_1 X2) = k2\_series\_1 ( \\
 & \quad \quad k1\_series\_1 X0 X1 X2)))
 \end{aligned} \tag{1}$$

Assume the following.

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

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v1\_xboole\_0 X0)\wedge((v1\_membered \\ & X0)\wedge(v7\_membered X0)))\wedge(((v1\_funct\_1 X1)\wedge((v1\_funct\_2 X1 k5\_numbers \\ & X0)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers X0))))))\wedge \\ & ((v1\_funct\_1 X2)\wedge((v1\_funct\_2 X2 k5\_numbers X0)\wedge(m1\_subset\_1 \\ & X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers X0))))))\Rightarrow(k1\_series\_1 \\ & X0 X1 X2 = k1\_valued\_1 X1 X2) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0)\wedge((v1\_funct\_2 X0 k5\_numbers k2\_numbers)\wedge \\ & (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k2\_numbers))))\Rightarrow \\ & (k10\_comseq\_3 X0 = k2\_series\_1 X0) \end{aligned} \tag{5}$$

Assume the following.

$$v7\_membered k2\_numbers \tag{6}$$

Assume the following.

$$\neg v1\_xboole\_0 k2\_numbers \tag{7}$$

Assume the following.

$$v1\_membered k2\_numbers \tag{8}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v1\_xboole\_0 X0)\wedge((v1\_membered \\ & X0)\wedge(v7\_membered X0)))\wedge(((v1\_funct\_1 X1)\wedge((v1\_funct\_2 X1 k5\_numbers \\ & X0)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers X0))))))\wedge \\ & ((v1\_funct\_1 X2)\wedge((v1\_funct\_2 X2 k5\_numbers X0)\wedge(m1\_subset\_1 \\ & X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers X0))))))\Rightarrow((v1\_funct\_1 \\ & (k1\_series\_1 X0 X1 X2))\wedge((v1\_funct\_2 (k1\_series\_1 X0 X1 X2) k5\_numbers \\ & X0)\wedge(m1\_subset\_1 (k1\_series\_1 X0 X1 X2) (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & k5\_numbers X0)))))) \end{aligned} \tag{9}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0)\wedge((v1\_funct\_2 X0 k5\_numbers k2\_numbers)\wedge \\ & (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k2\_numbers))))\Rightarrow \\ & ((v1\_funct\_1 (k10\_comseq\_3 X0))\wedge((v1\_funct\_2 (k10\_comseq\_3 \\ & X0) k5\_numbers k2\_numbers)\wedge(m1\_subset\_1 (k10\_comseq\_3 X0) (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 k5\_numbers k2\_numbers)))))) \end{aligned} \tag{10}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 k5\_numbers k2\_numbers) \wedge \\ & (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k2\_numbers)))))) \Rightarrow \\ & (\forall X1.((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers k2\_numbers) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k2\_numbers)))))) \Rightarrow \\ & (r2\_funct\_2 k5\_numbers k2\_numbers (k1\_series\_1 k2\_numbers (k10\_comseq\_3 \\ & X0) (k10\_comseq\_3 X1)) (k10\_comseq\_3 (k1\_series\_1 k2\_numbers \\ & X0 X1)))) \end{aligned}$$