t42_seq_4 (TMN6QSMnojgLDSvjuiAkUdwdwDmJ9ZgrPwg)

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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 $v3\_funct\_1 : \iota \Rightarrow o$ be given. Let $v2\_comseq\_2 : \iota \Rightarrow o$ be given. Let $k2\_seq\_2 : \iota \Rightarrow \iota$ be given. Let $k3\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $k47\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k20\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $k1\_rvsum\_1 : \iota \Rightarrow \iota$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $k8\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v1\_funct\_1\ X0) \wedge ((v1\_funct\_2\ X0\ k5\_numbers\ k1\_numbers) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers))))) \Rightarrow (\forall X1.((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ k5\_numbers\ k1\_numbers) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers))))) \Rightarrow (((v2\_comseq\_2\ X0) \wedge (v2\_comseq\_2\ X1)) \Rightarrow (k2\_seq\_2\ (k3\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ X0\ X1) = k7\_real\_1\ (k2\_seq\_2\ X0)\ (k2\_seq\_2\ X1)))) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (\forall X1.((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ k5\_numbers\ k1\_numbers) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers))))) \Rightarrow ((v3\_funct\_1\ X1) \Rightarrow (((\neg X0 \in k1\_rvsum\_1\ X1) \wedge (\forall X2.(m2\_subset\_1\ X2\ k1\_numbers\ k5\_numbers) \Rightarrow (k8\_nat\_1\ k1\_numbers\ X1\ X2 \neq X0))) \vee (k2\_seq\_2\ X1 = X0)))) \tag{2}$$

Assume the following.

$$m1\_subset\_1\ k1\_xboole\_0\ k4\_ordinal1 \tag{3}$$

Assume the following.

$$\forall X0.((v1\_funct\_1\ X0)\wedge((v1\_funct\_2\ X0\ k5\_numbers\ k1\_numbers)\wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers)))))\Rightarrow (\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ k5\_numbers\ k1\_numbers)\wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers)))))\Rightarrow (((v2\_comseq\_2\ X0)\wedge(v2\_comseq\_2\ X1))\Rightarrow(k2\_seq\_2\ (k20\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ X0\ X1) = k8\_real\_1\ (k2\_seq\_2\ X0)\ (k2\_seq\_2\ X1)))) \tag{4}$$

Assume the following.

$$\forall X0.((v1\_funct\_1\ X0)\wedge((v1\_funct\_2\ X0\ k5\_numbers\ k1\_numbers)\wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers)))))\Rightarrow (\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ k5\_numbers\ k1\_numbers)\wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers)))))\Rightarrow (((v2\_comseq\_2\ X0)\wedge(v2\_comseq\_2\ X1))\Rightarrow(k2\_seq\_2\ (k47\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ X0\ X1) = k9\_real\_1\ (k2\_seq\_2\ X0)\ (k2\_seq\_2\ X1)))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(v1\_xreal\_0\ X1))\Rightarrow(k9\_real\_1\ X0\ X1 = k6\_xcmplx\_0\ X0\ X1) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0\ X0)\wedge(v1\_xreal\_0\ X1))\Rightarrow(k9\_binop\_2\ X0\ X1 = k2\_xcmplx\_0\ X0\ X1) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(v1\_xreal\_0\ X1))\Rightarrow(k8\_real\_1\ X0\ X1 = k3\_xcmplx\_0\ X0\ X1) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k1\_numbers)\wedge(v1\_xreal\_0\ X1))\Rightarrow(k7\_real\_1\ X0\ X1 = k2\_xcmplx\_0\ X0\ X1) \tag{9}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{10}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0\ X0)\wedge(v1\_xreal\_0\ X1))\Rightarrow(k11\_binop\_2\ X0\ X1 = k3\_xcmplx\_0\ X0\ X1) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0\ X0)\wedge(v1\_xreal\_0\ X1))\Rightarrow(k10\_binop\_2\ X0\ X1 = k6\_xcmplx\_0\ X0\ X1) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ k5\_numbers\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ X0)))))\wedge(v7\_ordinal1\ X2))\Rightarrow(m1\_subset\_1\ (k8\_nat\_1\ X0\ X1\ X2)\ X0) \tag{14}$$

Assume the following.

$$m2\_subset\_1\ k6\_numbers\ k1\_numbers\ k5\_numbers \tag{15}$$

Assume the following.

$$\forall X0.((v1\_funct\_1\ X0)\wedge((v1\_funct\_2\ X0\ k5\_numbers\ k1\_numbers)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers)))))\Rightarrow(m1\_subset\_1\ (k2\_seq\_2\ X0)\ k1\_numbers) \tag{16}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \tag{17}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(v1\_xreal\_0\ X0) \tag{18}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers)))\Rightarrow(((v1\_funct\_1\ X0)\wedge((v3\_funct\_1\ X0)\wedge(v1\_funct\_2\ X0\ k5\_numbers\ k1\_numbers)))\Rightarrow((v1\_funct\_1\ X0)\wedge((v1\_funct\_2\ X0\ k5\_numbers\ k1\_numbers)\wedge(v2\_comseq\_2\ X0)))) \tag{19}$$

Theorem 1

$$\forall X0.((v1\_funct\_1\ X0)\wedge((v1\_funct\_2\ X0\ k5\_numbers\ k1\_numbers)\wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers)))))\Rightarrow (\forall X1.((v1\_funct\_1\ X1)\wedge((v1\_funct\_2\ X1\ k5\_numbers\ k1\_numbers)\wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers)))))\Rightarrow (((v3\_funct\_1\ X0)\wedge(v2\_comseq\_2\ X1))\Rightarrow((k2\_seq\_2\ (k3\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ X0\ X1) = k9\_binop\_2\ (k8\_nat\_1\ k1\_numbers\ X0\ k6\_numbers)\ (k2\_seq\_2\ X1))\wedge((k2\_seq\_2\ (k47\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ X0\ X1) = k10\_binop\_2\ (k8\_nat\_1\ k1\_numbers\ X0\ k6\_numbers)\ (k2\_seq\_2\ X1))\wedge((k2\_seq\_2\ (k47\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ X1\ X0) = k10\_binop\_2\ (k2\_seq\_2\ X1)\ (k8\_nat\_1\ k1\_numbers\ X0\ k6\_numbers))\wedge(k2\_seq\_2\ (k20\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ X0\ X1) = k11\_binop\_2\ (k8\_nat\_1\ k1\_numbers\ X0\ k6\_numbers)\ (k2\_seq\_2\ X1)))))))$$