t4_seqm_3 (TMFG8oLyvigoyiKm1pRRBGjBApcLiUBvpJG)

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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 $v6\_valued\_0 : \iota \Rightarrow o$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Assume the following.

$$\forall X0.((v1\_funct\_1\ X0) \wedge ((v1\_funct\_2\ X0\ k5\_numbers\ k1\_numbers) \wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers))))) \Rightarrow ((v6\_valued\_0\ X0) \Leftrightarrow (\forall X1.(m2\_subset\_1\ X1\ k1\_numbers\ k5\_numbers) \Rightarrow (\forall X2.(m2\_subset\_1\ X2\ k1\_numbers\ k5\_numbers) \Rightarrow (\neg r1\_xxreal\_0\ (k8\_nat\_1\ k1\_numbers\ X0\ X1)\ (k8\_nat\_1\ k1\_numbers\ X0\ (k2\_nat\_1\ (k2\_nat\_1\ X1\ np\_\_1)\ X2))))))) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_funct\_1\ X0)\wedge((v1\_funct\_2\ X0\ k5\_numbers\ k1\_numbers)\wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers)))))\Rightarrow (((\forall X1.(m2\_subset\_1\ X1\ k1\_numbers\ k5\_numbers)\Rightarrow(\neg r1\_xxreal\_0\ (k8\_nat\_1\ k1\_numbers\ X0\ X1)\ (k8\_nat\_1\ k1\_numbers\ X0\ (k2\_nat\_1\ X1\ np\_\_1))))\Rightarrow(\forall X1.(m2\_subset\_1\ X1\ k1\_numbers\ k5\_numbers)\Rightarrow (\forall X2.(m2\_subset\_1\ X2\ k1\_numbers\ k5\_numbers)\Rightarrow(\neg r1\_xxreal\_0\ (k8\_nat\_1\ k1\_numbers\ X0\ X1)\ (k8\_nat\_1\ k1\_numbers\ X0\ (k2\_nat\_1\ (k2\_nat\_1\ X1\ np\_\_1)\ X2))))))\wedge(((\forall X1.(m2\_subset\_1\ X1\ k1\_numbers\ k5\_numbers)\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ k1\_numbers\ k5\_numbers)\Rightarrow (\neg r1\_xxreal\_0\ (k8\_nat\_1\ k1\_numbers\ X0\ X1)\ (k8\_nat\_1\ k1\_numbers\ X0\ (k2\_nat\_1\ (k2\_nat\_1\ X1\ np\_\_1)\ X2)))))\Rightarrow(\forall X1.(m2\_subset\_1\ X1\ k1\_numbers\ k5\_numbers)\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ k1\_numbers\ k5\_numbers)\Rightarrow(\neg(\neg r1\_xxreal\_0\ X2\ X1)\wedge(r1\_xxreal\_0\ (k8\_nat\_1\ k1\_numbers\ X0\ X1)\ (k8\_nat\_1\ k1\_numbers\ X0\ X2))))))\wedge((\forall X1.(m2\_subset\_1\ X1\ k1\_numbers\ k5\_numbers)\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ k1\_numbers\ k5\_numbers)\Rightarrow(\neg(\neg r1\_xxreal\_0\ X2\ X1)\wedge(r1\_xxreal\_0\ (k8\_nat\_1\ k1\_numbers\ X0\ X1)\ (k8\_nat\_1\ k1\_numbers\ X0\ X2)))))\Rightarrow(\forall X1.(m2\_subset\_1\ X1\ k1\_numbers\ k5\_numbers)\Rightarrow(\neg r1\_xxreal\_0\ (k8\_nat\_1\ k1\_numbers\ X0\ X1)\ (k8\_nat\_1\ k1\_numbers\ X0\ (k2\_nat\_1\ X1\ np\_\_1)))))))) \tag{2}$$

Theorem 1

$$\forall X0.((v1\_funct\_1\ X0)\wedge((v1\_funct\_2\ X0\ k5\_numbers\ k1\_numbers)\wedge (m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers)))))\Rightarrow ((v6\_valued\_0\ X0)\Leftrightarrow(\forall X1.(m2\_subset\_1\ X1\ k1\_numbers\ k5\_numbers)\Rightarrow (\forall X2.(m2\_subset\_1\ X2\ k1\_numbers\ k5\_numbers)\Rightarrow(\neg(\neg r1\_xxreal\_0\ X2\ X1)\wedge(r1\_xxreal\_0\ (k8\_nat\_1\ k1\_numbers\ X0\ X1)\ (k8\_nat\_1\ k1\_numbers\ X0\ X2))))))$$