t19_ratfunc1 (TMGSfwxpUBRdcnGaYUoy-hzVd7oAob8bGHoP)

October 27, 2020

Let $v7\_struct\_0 : \iota \Rightarrow o$ be given. Let $l5\_algstr\_0 : \iota \Rightarrow o$ be given. Let $m1\_ratfunc1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_ratfunc1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_ratfunc1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_ratfunc1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_xtuple\_0 : \iota \Rightarrow \iota$ be given. 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 $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_algseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $v1\_ratfunc1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.(k1\_xtuple\_0\ (k4\_tarski\ X0\ X1) = X0) \wedge (k2\_xtuple\_0\ (k4\_tarski\ X0\ X1) = X1) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v7\_struct\_0\ X0) \wedge (l5\_algstr\_0\ X0)) \wedge (m1\_ratfunc1\ X1\ X0)) \Rightarrow (k5\_ratfunc1\ X0\ X1 = k2\_xtuple\_0\ X1) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v7\_struct\_0\ X0) \wedge (l5\_algstr\_0\ X0)) \wedge (m1\_ratfunc1\ X1\ X0)) \Rightarrow (k4\_ratfunc1\ X0\ X1 = k1\_xtuple\_0\ X1) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v7\_struct\_0\ X0) \wedge (l5\_algstr\_0\ X0)) \wedge (((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ k5\_numbers\ (u1\_struct\_0\ X0)) \wedge ((v1\_algseq\_1\ X1\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (u1\_struct\_0\ X0))))))) \wedge ((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ k5\_numbers\ (u1\_struct\_0\ X0)) \wedge ((v1\_algseq\_1\ X2\ X0) \wedge ((\neg v1\_ratfunc1\ X2\ X0) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (u1\_struct\_0\ X0))))))))) \Rightarrow (k3\_ratfunc1\ X0\ X1\ X2 = k4\_tarski\ X1\ X2) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v7\_struct\_0\ X0)\wedge(l5\_algstr\_0\ X0))\wedge (m1\_ratfunc1\ X1\ X0))\Rightarrow((v1\_funct\_1\ (k5\_ratfunc1\ X0\ X1))\wedge((v1\_funct\_2\ (k5\_ratfunc1\ X0\ X1)\ k5\_numbers\ (u1\_struct\_0\ X0))\wedge((v1\_algseq\_1\ (k5\_ratfunc1\ X0\ X1)\ X0)\wedge((\neg v1\_ratfunc1\ (k5\_ratfunc1\ X0\ X1)\ X0)\wedge (m1\_subset\_1\ (k5\_ratfunc1\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (u1\_struct\_0\ X0))))))))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v7\_struct\_0\ X0)\wedge(l5\_algstr\_0\ X0))\wedge (m1\_ratfunc1\ X1\ X0))\Rightarrow((v1\_funct\_1\ (k4\_ratfunc1\ X0\ X1))\wedge((v1\_funct\_2\ (k4\_ratfunc1\ X0\ X1)\ k5\_numbers\ (u1\_struct\_0\ X0))\wedge((v1\_algseq\_1\ (k4\_ratfunc1\ X0\ X1)\ X0)\wedge(m1\_subset\_1\ (k4\_ratfunc1\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (u1\_struct\_0\ X0))))))) \tag{6}$$

Assume the following.

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge(l5\_algstr\_0\ X0))\Rightarrow(\forall X1.\ (m1\_ratfunc1\ X1\ X0)\Leftrightarrow(\exists X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ k5\_numbers\ (u1\_struct\_0\ X0))\wedge((v1\_algseq\_1\ X2\ X0)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (u1\_struct\_0\ X0)))))))\wedge (\exists X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ k5\_numbers\ (u1\_struct\_0\ X0))\wedge((v1\_algseq\_1\ X3\ X0)\wedge((\neg v1\_ratfunc1\ X3\ X0)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (u1\_struct\_0\ X0)))))))))\wedge (X1 = k4\_tarski\ X2\ X3)))) \tag{7}$$

Theorem 1

$$\forall X0.((\neg v7\_struct\_0\ X0)\wedge(l5\_algstr\_0\ X0))\Rightarrow(\forall X1.\ (m1\_ratfunc1\ X1\ X0)\Rightarrow(X1 = k3\_ratfunc1\ X0\ (k4\_ratfunc1\ X0\ X1)\ (k5\_ratfunc1\ X0\ X1)))$$