l42_mesfun9c (TMY1QWiSm24QoJ6Qw8HDzMp2QWLNzokKnXa)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_prob\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4\_prob\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ 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 $k4\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_numbers : \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_mesfun6c : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_mesfunc5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1\_mesfunc6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k11\_mesfun7c : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12\_mesfun7c : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_comseq\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_comseq\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_rfunct\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\neg(X0 \in X1) \wedge ((m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X2)) \wedge (v1\_xboole\_0\ X2)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ X1) \Rightarrow ((v1\_xboole\_0\ X1) \vee (X0 \in X1)) \tag{2}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ k5\_numbers\ (k4\_partfun1\ X0\ k2\_numbers)) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k4\_partfun1\ X0\ k2\_numbers))))))) \Rightarrow (\forall X2.(v7\_ordinal1\ X2) \Rightarrow ((r2\_relset\_1\ X0\ k1\_numbers\ (k4\_mesfunc5\ X0\ k1\_numbers\ (k11\_mesfun7c\ X0\ X1)\ X2)\ (k5\_comseq\_3\ X0\ (k4\_mesfunc5\ X0\ k2\_numbers\ X1\ X2))) \wedge (r2\_relset\_1\ X0\ k1\_numbers\ (k4\_mesfunc5\ X0\ k1\_numbers\ (k12\_mesfun7c\ X0\ X1)\ X2)\ (k6\_comseq\_3\ X0\ (k4\_mesfunc5\ X0\ k2\_numbers\ X1\ X2))))))) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))\Rightarrow((r2\_relset\_1\ X0\ X1\ X2\ X3)\Leftrightarrow(X2 = X3)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))))\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ X0\ X1)\Leftrightarrow(m1\_subset\_1\ X2\ X1)) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ k5\_numbers\ (k3\_rfunct\_3\ X0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k3\_rfunct\_3\ X0\ X1))))))\wedge(v7\_ordinal1\ X3))\Rightarrow(k4\_mesfunc5\ X0\ X1\ X2\ X3 = k1\_funct\_1\ X2\ X3) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.k3\_rfunct\_3\ X0\ X1 = k4\_partfun1\ X0\ X1 \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_funct\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k2\_numbers))))\Rightarrow((v1\_funct\_1\ (k6\_comseq\_3\ X0\ X1))\wedge(m1\_subset\_1\ (k6\_comseq\_3\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers)))) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_funct\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k2\_numbers))))\Rightarrow((v1\_funct\_1\ (k5\_comseq\_3\ X0\ X1))\wedge(m1\_subset\_1\ (k5\_comseq\_3\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers)))) \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ k5\_numbers\ (k3\_rfunct\_3\ X0\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k3\_rfunct\_3\ X0\ X1))))))\wedge(v7\_ordinal1\ X3))\Rightarrow((v1\_funct\_1\ (k4\_mesfunc5\ X0\ X1\ X2\ X3))\wedge(m1\_subset\_1\ (k4\_mesfunc5\ X0\ X1\ X2\ X3)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((v1\_funct\_1\ X1)\wedge(\\(v1\_funct\_2\ X1\ k5\_numbers\ (k4\_partfun1\ X0\ k2\_numbers))\wedge(m1\_subset\_1\\X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k4\_partfun1\ X0\ k2\_numbers)))))))\Rightarrow\\((v1\_funct\_1\ (k12\_mesfun7c\ X0\ X1))\wedge((v1\_funct\_2\ (k12\_mesfun7c\\X0\ X1)\ k5\_numbers\ (k4\_partfun1\ X0\ k1\_numbers))\wedge(m1\_subset\_1\ (\\k12\_mesfun7c\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k4\_partfun1\\X0\ k1\_numbers))))))) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((v1\_funct\_1\ X1)\wedge(\\(v1\_funct\_2\ X1\ k5\_numbers\ (k4\_partfun1\ X0\ k2\_numbers))\wedge(m1\_subset\_1\\X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k4\_partfun1\ X0\ k2\_numbers)))))))\Rightarrow\\((v1\_funct\_1\ (k11\_mesfun7c\ X0\ X1))\wedge((v1\_funct\_2\ (k11\_mesfun7c\\X0\ X1)\ k5\_numbers\ (k4\_partfun1\ X0\ k1\_numbers))\wedge(m1\_subset\_1\ (\\k11\_mesfun7c\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k4\_partfun1\\X0\ k1\_numbers))))))) \tag{12}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge\\((v1\_prob\_1\ X1\ X0)\wedge((v4\_prob\_1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\\(k1\_zfmisc\_1\ X0))))))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\\X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k2\_numbers))))\Rightarrow(\forall X3.(\\m2\_subset\_1\ X3\ (k1\_zfmisc\_1\ X0)\ X1)\Rightarrow((r1\_mesfun6c\ X0\ X1\ X2\ X3)\Leftrightarrow\\((r1\_mesfunc6\ X0\ X1\ (k5\_comseq\_3\ X0\ X2)\ X3)\wedge(r1\_mesfunc6\ X0\ X1\ (\\k6\_comseq\_3\ X0\ X2)\ X3)))))) \tag{13}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((\neg v1\_xboole\_0\ X1)\wedge\\((v1\_prob\_1\ X1\ X0)\wedge((v4\_prob\_1\ X1\ X0)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\\(k1\_zfmisc\_1\ X0))))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ X1)\Rightarrow(\forall X3.\\(v7\_ordinal1\ X3)\Rightarrow(\forall X4.((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\\X4\ k5\_numbers\ (k4\_partfun1\ X0\ k2\_numbers))\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\\(k2\_zfmisc\_1\ k5\_numbers\ (k4\_partfun1\ X0\ k2\_numbers))))))\Rightarrow((\\\forall X5.(v7\_ordinal1\ X5)\Rightarrow(r1\_mesfun6c\ X0\ X1\ (k4\_mesfunc5\ X0\\k2\_numbers\ X4\ X5)\ X2))\Rightarrow((r1\_mesfunc6\ X0\ X1\ (k4\_mesfunc5\ X0\ k1\_numbers\\(k11\_mesfun7c\ X0\ X4)\ X3)\ X2)\wedge(r1\_mesfunc6\ X0\ X1\ (k4\_mesfunc5\ X0\\k1\_numbers\ (k12\_mesfun7c\ X0\ X4)\ X3)\ X2)))))))$$