t1_mesfunc6 (TMNx69MoSkbXwxRfwfSQP24hy6R5zmTWHhk)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ 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 $k1\_numbers : \iota$ be given. Let $r2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7\_numbers : \iota$ be given. Let $k10\_mesfunc1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_mesfunc5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k56\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_extreal1 : \iota \Rightarrow \iota$ be given. Let $k18\_complex1 : \iota \Rightarrow \iota$ be given. Let $v1\_membered : \iota \Rightarrow o$ be given. Let $k54\_valued\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v3\_valued\_0 : \iota \Rightarrow o$ be given. Let $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xcmplx\_0 : \iota \Rightarrow o$ be given. Let $k16\_complex1 : \iota \Rightarrow \iota$ be given. Let $k17\_complex1 : \iota \Rightarrow \iota$ be given. Let $v2\_valued\_0 : \iota \Rightarrow o$ be given. Let $k12\_supinf\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_valued\_0 : \iota \Rightarrow o$ be given. Let $v3\_membered : \iota \Rightarrow o$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k7\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ k1\_numbers) \Rightarrow ((X0 = X1) \Rightarrow (k3\_extreal1\ X0 = k18\_complex1\ X1))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))) \Rightarrow (r2\_relset\_1\ X0\ X1\ X2\ X2) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_membered\ X1) \wedge ((v1\_funct\_1\ X2) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))) \Rightarrow (k56\_valued\_1\ X0\ X1\ X2 = k54\_valued\_1\ X2) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v3\_valued\_0\ X0))) \Rightarrow (k1\_seq\_1\ X0\ X1 = k1\_funct\_1\ X0\ X1) \tag{4}$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0) \Rightarrow (k18\_complex1\ X0 = k16\_complex1\ X0) \tag{5}$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0) \Rightarrow (k17\_complex1\ X0 = k16\_complex1\ X0) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v2\_valued\_0\ X0))) \Rightarrow (k12\_supinf\_2\ X0\ X1 = k1\_funct\_1\ X0\ X1) \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_valued\_0\ X0))) \Rightarrow (v1\_xcmplx\_0\ (k1\_funct\_1\ X0\ X1)) \tag{8}$$

Assume the following.

$$v3\_membered\ k1\_numbers \tag{9}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1\_membered\ X1) \wedge ((v1\_funct\_1\ X2) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))))) \Rightarrow ((v1\_funct\_1\ (k56\_valued\_1\ X0\ X1\ X2)) \wedge (m1\_subset\_1\ (k56\_valued\_1\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers)))) \tag{10}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_valued\_0\ X0))) \Rightarrow ((v1\_relat\_1\ (k54\_valued\_1\ X0)) \wedge ((v1\_funct\_1\ (k54\_valued\_1\ X0)) \wedge (v3\_valued\_0\ (k54\_valued\_1\ X0)))) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v3\_valued\_0\ X0))) \Rightarrow (m1\_subset\_1\ (k1\_seq\_1\ X0\ X1)\ k1\_numbers) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0) \wedge ((v1\_funct\_1\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers))))) \Rightarrow ((v1\_funct\_1\ (k1\_mesfunc5\ X0\ X1)) \wedge (m1\_subset\_1\ (k1\_mesfunc5\ X0\ X1)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k7\_numbers)))) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v2\_valued\_0\ X0))) \Rightarrow (m1\_subset\_1\ (k12\_supinf\_2\ X0\ X1)\ k7\_numbers) \tag{14}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((v1\_funct\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers))))\Rightarrow(k1\_mesfunc5\ X0\ X1 = X1)) \tag{15}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_valued\_0\ X0)))\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v3\_valued\_0\ X1)))\Rightarrow((X1 = k54\_valued\_1\ X0)\Leftrightarrow((k9\_xtuple\_0\ X1 = k9\_xtuple\_0\ X0)\wedge(\forall X2.(X2 \in k9\_xtuple\_0\ X1)\Rightarrow(k1\_funct\_1\ X1\ X2 = k17\_complex1\ (k1\_funct\_1\ X0\ X2))))))) \tag{16}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v4\_relat\_1\ X1\ X0)\wedge((v5\_relat\_1\ X1\ k7\_numbers)\wedge(v1\_funct\_1\ X1))))\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k7\_numbers))))\Rightarrow((X2 = k10\_mesfunc1\ X0\ X1)\Leftrightarrow((k9\_xtuple\_0\ X2 = k9\_xtuple\_0\ X1)\wedge(\forall X3.(m1\_subset\_1\ X3\ X0)\Rightarrow((X3 \in k9\_xtuple\_0\ X2)\Rightarrow(k12\_supinf\_2\ X2\ X3 = k3\_extreal1\ (k12\_supinf\_2\ X1\ X3)))))))) \tag{17}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge(v3\_valued\_0\ X0))\Rightarrow((v1\_relat\_1\ X0)\wedge(v1\_valued\_0\ X0)) \tag{18}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge(v3\_valued\_0\ X0))\Rightarrow((v1\_relat\_1\ X0)\wedge(v2\_valued\_0\ X0)) \tag{19}$$

Assume the following.

$$\forall X0.(v3\_membered\ X0)\Rightarrow(v1\_membered\ X0) \tag{20}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow((v4\_relat\_1\ X2\ X0)\wedge(v5\_relat\_1\ X2\ X1)) \tag{21}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v1\_relat\_1\ X2) \tag{22}$$

Assume the following.

$$\forall X0.\forall X1.(v3\_membered\ X1)\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow(v3\_valued\_0\ X2)) \tag{23}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((v1\_funct\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k1\_numbers))))\Rightarrow(r2\_relset\_1\ X0\ k7\_numbers\ (k10\_mesfunc1\ X0\ (k1\_mesfunc5\ X0\ X1))\ (k1\_mesfunc5\ X0\ (k56\_valued\_1\ X0\ k1\_numbers\ X1))))$$