t19_mesfunc2 (TMNk7U43S4C2RQhXSunxi2ja18eHECzkvku)

October 27, 2020

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 $k7\_numbers : \iota$ be given. Let $k12\_supinf\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_mesfunc2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_mesfunc2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_supinf\_2 : \iota$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_supinf\_2 : \iota \Rightarrow \iota$ be given. Let $k3\_extreal1 : \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $k1\_measure6 : \iota \Rightarrow \iota$ be given. Let $v2\_valued\_0 : \iota \Rightarrow o$ 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.

$$\forall X0.(m1\_subset\_1\ X0\ k7\_numbers) \Rightarrow ((r1\_xxreal\_0\ (k2\_supinf\_2\ (k3\_extreal1\ X0))\ X0) \wedge (r1\_xxreal\_0\ X0\ (k3\_extreal1\ X0))) \tag{1}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k7\_numbers) \Rightarrow ((r1\_xxreal\_0\ X0\ k6\_numbers) \Rightarrow (k3\_extreal1\ X0 = k2\_supinf\_2\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k7\_numbers) \Rightarrow ((X0 = k6\_numbers) \Leftrightarrow (k3\_extreal1\ X0 = k6\_numbers)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1)) \Leftrightarrow (r1\_tarski\ X0\ X1) \tag{4}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k7\_numbers) \Rightarrow (r1\_xxreal\_0\ k6\_numbers\ (k3\_extreal1\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0)\Rightarrow(\forall X1.(v1\_xxreal\_0\ X1)\Rightarrow(((r1\_xxreal\_0\ X0\ X1)\wedge(r1\_xxreal\_0\ X1\ X0))\Rightarrow(X0 = X1))) \tag{6}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((v1\_funct\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k7\_numbers))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ X0)\Rightarrow(((k12\_supinf\_2\ (k1\_mesfunc2\ X0\ X1)\ X2 = k12\_supinf\_2\ X1\ X2)\vee(k12\_supinf\_2\ (k1\_mesfunc2\ X0\ X1)\ X2 = k1\_supinf\_2))\wedge((k12\_supinf\_2\ (k2\_mesfunc2\ X0\ X1)\ X2 = k2\_supinf\_2\ (k12\_supinf\_2\ X1\ X2))\vee(k12\_supinf\_2\ (k2\_mesfunc2\ X0\ X1)\ X2 = k1\_supinf\_2))))) \tag{7}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((v1\_funct\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k7\_numbers))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ X0)\Rightarrow((\neg r1\_xxreal\_0\ (k12\_supinf\_2\ (k1\_mesfunc2\ X0\ X1)\ X2)\ k1\_supinf\_2)\Rightarrow(k12\_supinf\_2\ (k2\_mesfunc2\ X0\ X1)\ X2 = k1\_supinf\_2)))) \tag{8}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((v1\_funct\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k7\_numbers))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ X0)\Rightarrow(r1\_xxreal\_0\ k1\_supinf\_2\ (k12\_supinf\_2\ (k1\_mesfunc2\ X0\ X1)\ X2)))) \tag{9}$$

Assume the following.

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

Assume the following.

$$k1\_supinf\_2 = k1\_xboole\_0 \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.v1\_relat\_1\ (k2\_zfmisc\_1\ X0\ X1) \tag{12}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k7\_numbers)\Rightarrow(m1\_subset\_1\ (k3\_extreal1\ X0)\ k7\_numbers) \tag{13}$$

Assume the following.

$$m1\_subset\_1\ k1\_supinf\_2\ k7\_numbers \tag{14}$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0)\Rightarrow(m1\_subset\_1\ (k1\_measure6\ X0)\ k7\_numbers) \tag{15}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v2\_valued\_0\ X0)))\Rightarrow(m1\_subset\_1\ (k12\_supinf\_2\ X0\ X1)\ k7\_numbers) \tag{16}$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0\ X0)\Rightarrow(k1\_measure6\ X0 = X0) \tag{17}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))\Rightarrow((v4\_relat\_1\ X2\ X0)\wedge(v5\_relat\_1\ X2\ X1)) \tag{18}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(v1\_relat\_1\ X1)) \tag{19}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge(v5\_relat\_1\ X0\ k7\_numbers))\Rightarrow((v1\_relat\_1\ X0)\wedge(v2\_valued\_0\ X0)) \tag{20}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k7\_numbers)\Rightarrow(v1\_xxreal\_0\ X0) \tag{21}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((v1\_funct\_1\ X1)\wedge(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ k7\_numbers))))\Rightarrow(\forall X2.(m1\_subset\_1\ X2\ X0)\Rightarrow((k12\_supinf\_2\ (k1\_mesfunc2\ X0\ X1)\ X2 = k12\_supinf\_2\ X1\ X2)\Rightarrow(k12\_supinf\_2\ (k2\_mesfunc2\ X0\ X1)\ X2 = k1\_supinf\_2))))$$