t14_pdiff_6 (TMM7oecbaaYFXUXuD3jofd6Jt1DMa4R33qR)

October 27, 2020

Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ 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 $k1\_euclid : \iota \Rightarrow \iota$ be given. Let $v1\_pdiff\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2\_pdiff\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k4\_real\_ns1 : \iota \Rightarrow \iota$ be given. Let $v13\_vectsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_lopban\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v1\_normsp\_1 : \iota \Rightarrow o$ be given. Let $v3\_lopban\_1 : \iota \Rightarrow o$ be given. Let $l1\_normsp\_1 : \iota \Rightarrow o$ be given. Let $k4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_euclid : \iota \Rightarrow \iota$ be given. Let $u1\_algstr\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_real\_ns1 : \iota \Rightarrow \iota$ be given. Let $k1\_numbers : \iota$ be given. Let $u1\_rlvect\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_real\_ns1 : \iota \Rightarrow \iota$ be given. Let $u1\_normsp\_0 : \iota \Rightarrow \iota$ be given. Let $k3\_real\_ns1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ k5\_numbers) \Rightarrow (\forall X2.((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ (k1\_euclid\ X0)\ (k1\_euclid\ X1)) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k1\_euclid\ X0)\ (k1\_euclid\ X1))))))) \Rightarrow (\forall X3.((v1\_funct\_1\ X3) \wedge ((v1\_funct\_2\ X3\ (u1\_struct\_0\ (k4\_real\_ns1\ X0))\ (u1\_struct\_0\ (k4\_real\_ns1\ X1))) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (k4\_real\_ns1\ X0))\ (u1\_struct\_0\ (k4\_real\_ns1\ X1))))))) \Rightarrow ((r1\_funct\_2\ (k1\_euclid\ X0)\ (k1\_euclid\ X1)\ (u1\_struct\_0\ (k4\_real\_ns1\ X0))\ (u1\_struct\_0\ (k4\_real\_ns1\ X1))\ X2\ X3) \Rightarrow ((v2\_pdiff\_6\ X2\ X1\ X0) \Leftrightarrow (v1\_lopban\_1\ X3\ (k4\_real\_ns1\ X0)\ (k4\_real\_ns1\ X1)))))))) \tag{1}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k5\_numbers)\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (k1\_euclid\ X0)\ (k1\_euclid\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k1\_euclid\ X0)\ (k1\_euclid\ X1))))))\Rightarrow(\forall X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ (u1\_struct\_0\ (k4\_real\_ns1\ X0))\ (u1\_struct\_0\ (k4\_real\_ns1\ X1)))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (k4\_real\_ns1\ X0))\ (u1\_struct\_0\ (k4\_real\_ns1\ X1)))))))\Rightarrow((r1\_funct\_2\ (k1\_euclid\ X0)\ (k1\_euclid\ X1)\ (u1\_struct\_0\ (k4\_real\_ns1\ X0))\ (u1\_struct\_0\ (k4\_real\_ns1\ X1))\ X2\ X3)\Rightarrow((v1\_pdiff\_6\ X2\ X1\ X0)\Leftrightarrow(v13\_vectsp\_1\ X3\ (k4\_real\_ns1\ X0)\ (k4\_real\_ns1\ X1)))))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.((\neg v1\_xboole\_0\ X1)\wedge((\neg v1\_xboole\_0\ X3)\wedge(((v1\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ X0\ X1)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\wedge((v1\_funct\_1\ X5)\wedge((v1\_funct\_2\ X5\ X2\ X3)\wedge(m1\_subset\_1\ X5\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X2\ X3)))))))\Rightarrow((r1\_funct\_2\ X0\ X1\ X2\ X3\ X4\ X5)\Leftrightarrow(X4 = X5)) \tag{3}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{4}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow((\neg v2\_struct\_0\ (k4\_real\_ns1\ X0))\wedge((v1\_normsp\_1\ (k4\_real\_ns1\ X0))\wedge(v3\_lopban\_1\ (k4\_real\_ns1\ X0)))) \tag{5}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\neg v1\_xboole\_0\ (k1\_euclid\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow((\neg v2\_struct\_0\ (k4\_real\_ns1\ X0))\wedge((v1\_normsp\_1\ (k4\_real\_ns1\ X0))\wedge(l1\_normsp\_1\ (k4\_real\_ns1\ X0)))) \tag{7}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.((\neg v2\_struct\_0\ X1)\wedge((v1\_normsp\_1\ X1)\wedge(l1\_normsp\_1\ X1)))\Rightarrow((X1 = k4\_real\_ns1\ X0)\Leftrightarrow((u1\_struct\_0\ X1 = k1\_euclid\ X0)\wedge((k4\_struct\_0\ X1 = k5\_euclid\ X0)\wedge((r1\_funct\_2\ (k2\_zfmisc\_1\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X1))\ (u1\_struct\_0\ X1)\ (k2\_zfmisc\_1\ (k1\_euclid\ X0)\ (k1\_euclid\ X0))\ (k1\_euclid\ X0)\ (u1\_algstr\_0\ X1)\ (k1\_real\_ns1\ X0))\wedge((r1\_funct\_2\ (k2\_zfmisc\_1\ k1\_numbers\ (u1\_struct\_0\ X1))\ (u1\_struct\_0\ X1)\ (k2\_zfmisc\_1\ k1\_numbers\ (k1\_euclid\ X0))\ (k1\_euclid\ X0)\ (u1\_rlvect\_1\ X1)\ (k2\_real\_ns1\ X0))\wedge(r1\_funct\_2\ (u1\_struct\_0\ X1)\ k1\_numbers\ (k1\_euclid\ X0)\ k1\_numbers\ (u1\_normsp\_0\ X1)\ (k3\_real\_ns1\ X0))))))))) \tag{8}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \tag{9}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ k5\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k5\_numbers)\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (k1\_euclid\ X0)\ (k1\_euclid\ X1))\wedge((v1\_pdiff\_6\ X2\ X1\ X0)\wedge((v2\_pdiff\_6\ X2\ X1\ X0)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k1\_euclid\ X0)\ (k1\_euclid\ X1))))))))\Leftrightarrow((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ (u1\_struct\_0\ (k4\_real\_ns1\ X0))\ (u1\_struct\_0\ (k4\_real\_ns1\ X1)))\wedge((v13\_vectsp\_1\ X2\ (k4\_real\_ns1\ X0)\ (k4\_real\_ns1\ X1))\wedge((v1\_lopban\_1\ X2\ (k4\_real\_ns1\ X0)\ (k4\_real\_ns1\ X1))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0\ (k4\_real\_ns1\ X0))\ (u1\_struct\_0\ (k4\_real\_ns1\ X1))))))))))$$