t17_pdiff_3 (TMSD2dYY4eBQdX6X92AX7cgJ2LQbj8CSG5g)

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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 $k1\_euclid : \iota \Rightarrow \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $k1\_numbers : \iota$ be given. Let $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_rcomp\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_pdiff\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $r1\_pdiff\_3 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_pdiff\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_pdiff\_3 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $v1\_fdiff\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_numbers : \iota$ be given. Let $v3\_funct\_1 : \iota \Rightarrow o$ be given. Let $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $k3\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2\_comseq\_2 : \iota \Rightarrow o$ be given. Let $k20\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k37\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k47\_valued\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_pdiff\_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_seq\_2 : \iota \Rightarrow \iota$ be given. Let $r3\_pdiff\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_fdiff\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11\_pdiff\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v3\_card\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $v6\_membered : \iota \Rightarrow o$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(m2\_finseq\_2\ X0\ k1\_numbers\ (k1\_euclid\ np\_\_2)) \Rightarrow (\forall X1.\ ((v1\_funct\_1\ X1) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k1\_euclid\ np\_\_2)\ k1\_numbers)))) \Rightarrow ((r1\_pdiff\_3\ X1\ X0) \Leftrightarrow (r3\_pdiff\_1\ np\_\_2\ np\_\_1\ (k1\_pdiff\_3\ np\_\_1\ np\_\_2\ X1)\ X0))) \tag{1}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k1\_numbers)\Rightarrow(\forall X2.(m2\_finseq\_2\ X2\ k1\_numbers\ (k1\_euclid\ np\_\_2))\Rightarrow(\forall X3.((v1\_funct\_1\ X3)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k1\_euclid\ np\_\_2)\ k1\_numbers))))\Rightarrow(((X2 = k10\_finseq\_1\ X0\ X1)\wedge(r1\_pdiff\_3\ X3\ X2))\Rightarrow(k2\_pdiff\_3\ X3\ X2 = k1\_fdiff\_1\ (k1\_pdiff\_2\ np\_\_2\ np\_\_1\ (k1\_pdiff\_3\ np\_\_1\ np\_\_2\ X3)\ X2)\ X0)))))) \tag{2}$$

Assume the following.

$$\forall X0.((v1\_funct\_1\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k1\_euclid\ np\_\_2)\ k1\_numbers))))\Rightarrow(\forall X1.(m2\_finseq\_2\ X1\ k1\_numbers\ (k1\_euclid\ np\_\_2))\Rightarrow(\forall X2.(m1\_rcomp\_1\ X2\ (k1\_seq\_1\ (k1\_pdiff\_1\ np\_\_1\ np\_\_2)\ X1))\Rightarrow(((r3\_pdiff\_1\ np\_\_2\ np\_\_1\ X0\ X1)\wedge(r1\_tarski\ X2\ (k1\_relset\_1\ k1\_numbers\ (k1\_pdiff\_2\ np\_\_2\ np\_\_1\ X0\ X1))))\Rightarrow(\forall X3.((v2\_relat\_1\ X3)\wedge((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ k5\_numbers\ k1\_numbers)\wedge((v1\_fdiff\_1\ X3\ k6\_numbers)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers)))))))\Rightarrow(\forall X4.((v1\_funct\_1\ X4)\wedge((v3\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ k5\_numbers\ k1\_numbers)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers))))))\Rightarrow(((k2\_relset\_1\ k1\_numbers\ X4 = k1\_tarski\ (k1\_seq\_1\ (k1\_pdiff\_1\ np\_\_1\ np\_\_2)\ X1))\wedge(r1\_tarski\ (k2\_relset\_1\ k1\_numbers\ (k3\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ X3\ X4))\ X2))\Rightarrow((v2\_comseq\_2\ (k20\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ (k37\_valued\_1\ k5\_numbers\ k1\_numbers\ X3)\ (k47\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ k1\_numbers\ (k3\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ X3\ X4)\ (k1\_pdiff\_2\ np\_\_2\ np\_\_1\ X0\ X1))\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ k1\_numbers\ X4\ (k1\_pdiff\_2\ np\_\_2\ np\_\_1\ X0\ X1)))))\wedge(k11\_pdiff\_1\ np\_\_2\ np\_\_1\ X0\ X1 = k2\_seq\_2\ (k20\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ (k37\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ X3)\ (k47\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ k1\_numbers\ (k3\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ X3\ X4)\ (k1\_pdiff\_2\ np\_\_2\ np\_\_1\ X0\ X1))\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ k1\_numbers\ X4\ (k1\_pdiff\_2\ np\_\_2\ np\_\_1\ X0\ X1)))))))))))) \tag{3}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k1\_numbers)\Rightarrow(\forall X2.(m2\_finseq\_2\ X2\ k1\_numbers\ (k1\_euclid\ np\_\_2))\Rightarrow(\forall X3.((v1\_funct\_1\ X3)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k1\_euclid\ np\_\_2)\ k1\_numbers))))\Rightarrow(((X2 = k10\_finseq\_1\ X0\ X1)\wedge(r3\_pdiff\_1\ np\_\_2\ np\_\_1\ X3\ X2))\Rightarrow(k11\_pdiff\_1\ np\_\_2\ np\_\_1\ X3\ X2 = k1\_fdiff\_1\ (k1\_pdiff\_2\ np\_\_2\ np\_\_1\ X3\ X2)\ X0))))) \tag{4}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow(\forall X1.((v3\_card\_1\ X1\ np\_\_2)\wedge (m2\_finseq\_1\ X1\ X0))\Rightarrow(\exists X2.(m1\_subset\_1\ X2\ X0)\wedge(\exists X3.\ (m1\_subset\_1\ X3\ X0)\wedge(X1 = k10\_finseq\_1\ X2\ X3)))) \tag{5}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_2)\wedge(m2\_subset\_1\ np\_\_2\ k1\_numbers\ k5\_numbers))\wedge ((m1\_subset\_1\ np\_\_2\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_2\ k1\_numbers)) \tag{6}$$

Assume the following.

$$\neg v1\_xboole\_0\ np\_\_2 \tag{7}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_1)\wedge(m2\_subset\_1\ np\_\_1\ k1\_numbers\ k5\_numbers))\wedge ((m1\_subset\_1\ np\_\_1\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_1\ k1\_numbers)) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_2\ X1\ X0)\Rightarrow(\forall X2.(m2\_finseq\_2\ X2\ X0\ X1)\Leftrightarrow(m1\_subset\_1\ X2\ X1)) \tag{9}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{10}$$

Assume the following.

$$v6\_membered\ k4\_ordinal1 \tag{11}$$

Assume the following.

$$\neg v1\_xboole\_0\ k1\_numbers \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_2\ X1\ X0)\Rightarrow(\forall X2.(m2\_finseq\_2\ X2\ X0\ X1)\Rightarrow(m2\_finseq\_1\ X2\ X0)) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_subset\_1\ X0\ k5\_numbers)\wedge (((\neg v1\_xboole\_0\ X1)\wedge(m1\_subset\_1\ X1\ k5\_numbers))\wedge((v1\_funct\_1\ X2)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k1\_euclid\ X1)\ k1\_numbers))))))\Rightarrow((v1\_funct\_1\ (k1\_pdiff\_3\ X0\ X1\ X2))\wedge((v1\_funct\_2\ (k1\_pdiff\_3\ X0\ X1\ X2)\ (k1\_euclid\ X1)\ k1\_numbers)\wedge(m1\_subset\_1\ (k1\_pdiff\_3\ X0\ X1\ X2)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k1\_euclid\ X1)\ k1\_numbers))))) \tag{14}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(m1\_finseq\_2\ (k1\_euclid\ X0)\ k1\_numbers) \quad (15)$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_euclid\ X0))\Rightarrow(v3\_card\_1\ X1\ X0)) \quad (16)$$

Assume the following.

$$\forall X0.(v6\_membered\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ X0)\Rightarrow(v7\_ordinal1\ X1)) \quad (17)$$

Theorem 1

$$\forall X0.((v1\_funct\_1\ X0)\wedge(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k1\_euclid\ np\_\_2)\ k1\_numbers))))\Rightarrow(\forall X1.(m2\_finseq\_2\ X1\ k1\_numbers\ (k1\_euclid\ np\_\_2))\Rightarrow(\forall X2.(m1\_rcomp\_1\ X2\ (k1\_seq\_1\ (k1\_pdiff\_1\ np\_\_1\ np\_\_2)\ X1))\Rightarrow(((r1\_pdiff\_3\ X0\ X1)\wedge(r1\_tarski\ X2\ (k1\_relset\_1\ k1\_numbers\ (k1\_pdiff\_2\ np\_\_2\ np\_\_1\ (k1\_pdiff\_3\ np\_\_1\ np\_\_2\ X0)\ X1))))\Rightarrow(\forall X3.((v2\_relat\_1\ X3)\wedge((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ k5\_numbers\ k1\_numbers)\wedge((v1\_fdiff\_1\ X3\ k6\_numbers)\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers))))))))\Rightarrow(\forall X4.((v1\_funct\_1\ X4)\wedge((v3\_funct\_1\ X4)\wedge((v1\_funct\_2\ X4\ k5\_numbers\ k1\_numbers)\wedge(m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ k1\_numbers))))))\Rightarrow(((k2\_relset\_1\ k1\_numbers\ X4 = k1\_tarski\ (k1\_seq\_1\ (k1\_pdiff\_1\ np\_\_1\ np\_\_2)\ X1))\wedge(r1\_tarski\ (k2\_relset\_1\ k1\_numbers\ (k3\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ X3\ X4))\ X2))\Rightarrow((v2\_comseq\_2\ (k20\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ (k37\_valued\_1\ k5\_numbers\ k1\_numbers\ X3)\ (k47\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ k1\_numbers\ (k3\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ X3\ X4)\ (k1\_pdiff\_2\ np\_\_2\ np\_\_1\ (k1\_pdiff\_3\ np\_\_1\ np\_\_2\ X0)\ X1))\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ k1\_numbers\ X4\ (k1\_pdiff\_2\ np\_\_2\ np\_\_1\ (k1\_pdiff\_3\ np\_\_1\ np\_\_2\ X0)\ X1)))))\wedge(k2\_pdiff\_3\ X0\ X1 = k2\_seq\_2\ (k20\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ (k37\_valued\_1\ k5\_numbers\ k1\_numbers\ X3)\ (k47\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ k1\_numbers\ (k3\_valued\_1\ k5\_numbers\ k1\_numbers\ k1\_numbers\ X3\ X4)\ (k1\_pdiff\_2\ np\_\_2\ np\_\_1\ (k1\_pdiff\_3\ np\_\_1\ np\_\_2\ X0)\ X1))\ (k8\_funct\_2\ k5\_numbers\ k1\_numbers\ k1\_numbers\ X4\ (k1\_pdiff\_2\ np\_\_2\ np\_\_1\ (k1\_pdiff\_3\ np\_\_1\ np\_\_2\ X0)\ X1))))))))))))$$