

# t55\_pdiff\_9 (TMPYSJXmKbBWCfUeKDGFN- WZZPit1YwYUpUG)

October 27, 2020

Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_euclid : \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r2\_pdiff\_9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_pdiff\_7 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $r2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_pdiff\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_pdiff\_6 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1\_xboole\_0 X0) \wedge (m2\_subset\_1 X0 k1\_numbers k5\_numbers)) \Rightarrow \\ & (\forall X1. \forall X2. ((v1\_funct\_1 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (k1\_euclid X0) k1\_numbers)))) \Rightarrow (\forall X3. ((v1\_funct\_1 \\ & X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k1\_euclid X0) \\ & (k1\_euclid np\_1)))))) \Rightarrow ((r2\_relset\_1 (k1\_euclid X0) (k1\_euclid \\ & np\_1) (k3\_pdiff\_1 X0 X2) X3) \Rightarrow (((r1\_tarski X1 (k1\_relset\_1 (k1\_euclid \\ & X0) X2)) \wedge (r2\_pdiff\_9 X1 X0 X2)) \Leftrightarrow (r1\_pdiff\_6 X1 np\_1 X0 X3)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1\_xboole\_0 X0) \wedge (m2\_subset\_1 X0 k1\_numbers k5\_numbers)) \Rightarrow \\ & (\forall X1. ((\neg v1\_xboole\_0 X1) \wedge (m2\_subset\_1 X1 k1\_numbers k5\_numbers)) \Rightarrow \\ & (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k1\_euclid X0))) \Rightarrow (\forall X3. \\ & ((v1\_funct\_1 X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 ( \\ & k1\_euclid X0) (k1\_euclid X1)))))) \Rightarrow ((r1\_pdiff\_6 X2 X1 X0 X3) \Rightarrow (v1\_pdiff\_7 \\ & X2 X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & ((v2\_xreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$\neg v1\_xboole\_0 np\_1 \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\wedge(m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))\Rightarrow((r2\_relset\_1 X0 X1 X2 X3)\Leftrightarrow(X2 = X3)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge((\neg v1\_xboole\_0 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))))\Rightarrow(\forall X2.(m2\_subset\_1 X2 X0 X1)\Leftrightarrow(m1\_subset\_1 X2 X1)) \quad (6)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (7)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1)\wedge(v3\_ordinal1 k4\_ordinal1) \quad (8)$$

Assume the following.

$$\neg v1\_xboole\_0 k1\_numbers \quad (9)$$

Assume the following.

$$m1\_subset\_1 k5\_numbers (k1\_zfmisc\_1 k1\_numbers) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1 X0)\wedge((v1\_funct\_1 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k1\_euclid X0) k1\_numbers))))\Rightarrow((v1\_funct\_1 (k3\_pdfiff\_1 X0 X1))\wedge(m1\_subset\_1 (k3\_pdfiff\_1 X0 X1) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k1\_euclid X0) (k1\_euclid np\_1)))))) \quad (11)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1)\Rightarrow(v7\_ordinal1 X0) \quad (12)$$

### Theorem 1

$$\forall X0.((\neg v1\_xboole\_0 X0)\wedge(m2\_subset\_1 X0 k1\_numbers k5\_numbers))\Rightarrow(\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_euclid X0)))\Rightarrow(\forall X2.((v1\_funct\_1 X2)\wedge(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k1\_euclid X0) k1\_numbers))))\Rightarrow(((r1\_tarski X1 (k1\_relset\_1 (k1\_euclid X0) X2))\wedge(r2\_pdfiff\_9 X1 X0 X2))\Rightarrow(v1\_pdfiff\_7 X1 X0))))$$