

## t32\_pdiff\_7

(TMEjq8cFFd3gqJGZqUq5EuMTJn83zvknTP)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  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  $r2\_pdiff\_7 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $r4\_pdiff\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarski X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X2)) \Rightarrow (r1\_tarski X0 X2) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v4\_relat\_1 X1 X0)) \Rightarrow (m1\_subset\_1 (k1\_relset\_1 X0 X1) (k1\_zfmisc\_1 X0)) \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v1\_xboole\_0 X0) \wedge (m1\_subset\_1 X0 k5\_numbers)) \Rightarrow \\ & (\forall X1. ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X1 k5\_numbers)) \Rightarrow \\ & (\forall X2. (m1\_subset\_1 X2 k5\_numbers) \Rightarrow (\forall X3. ((v1\_funct\_1 \\ & X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k1\_euclid X0) \\ & (k1\_euclid X1)))))) \Rightarrow (\forall X4. (r2\_pdiff\_7 X0 X1 X2 X3 X4) \Leftrightarrow ((r1\_tarski \\ & X4 (k1\_relset\_1 (k1\_euclid X0) X3)) \wedge (\forall X5. (m2\_finseq\_2 \\ & X5 k1\_numbers (k1\_euclid X0)) \Rightarrow ((X5 \in X4) \Rightarrow (r4\_pdiff\_1 X0 X1 X2 (k2\_partfun1 \\ & (k1\_euclid X0) (k1\_euclid X1) X3 X4) X5)))))))))) \quad (4) \end{aligned}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v4\_relat\_1 X2 X0)\wedge(v5\_relat\_1 X2 X1)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (6)$$

**Theorem 1**

$$\begin{aligned} &\forall X0.(m1\_subset\_1 X0 k5\_numbers)\Rightarrow(\forall X1.\forall X2. \\ &((\neg v1\_xboole\_0 X2)\wedge(m1\_subset\_1 X2 k5\_numbers))\Rightarrow(\forall X3. \\ &((\neg v1\_xboole\_0 X3)\wedge(m1\_subset\_1 X3 k5\_numbers))\Rightarrow(\forall X4. \\ &((v1\_funct\_1 X4)\wedge(m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 ( \\ &k1\_euclid X2) (k1\_euclid X3))))))\Rightarrow((r2\_pdfiff\_7 X2 X3 X0 X4 X1)\Rightarrow( \\ &m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_euclid X2)))))) \end{aligned}$$