

# t8\_pdiff\_8 (TMXthxuAWnqWgzZKcwh- BRZvgUWV4zcZBTmH)

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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  $v1\_lopban\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_pdiff\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_real\_ns1 : \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_rlvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $l1\_normsp\_1 : \iota \Rightarrow o$  be given. Let  $l1\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $l2\_normsp\_0 : \iota \Rightarrow o$  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  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 \\
 & X1 k5\_numbers) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 (k4\_real\_ns1 \\
 & X0))) \Rightarrow (\forall X3.(m1\_subset\_1 X3 k1\_numbers) \Rightarrow (k3\_funct\_2 ( \\
 & u1\_struct\_0 (k4\_real\_ns1 X0)) (u1\_struct\_0 (k4\_real\_ns1 np\_1)) \\
 & (k4\_pdiff\_1 X1 X0) (k1\_rlvect\_1 (k4\_real\_ns1 X0) X2 X3) = k1\_rlvect\_1 \\
 & (k4\_real\_ns1 np\_1) (k3\_funct\_2 (u1\_struct\_0 (k4\_real\_ns1 X0)) \\
 & (u1\_struct\_0 (k4\_real\_ns1 np\_1)) (k4\_pdiff\_1 X1 X0) X2) X3))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & ((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge \\
 & ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned}
 & \forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge \\
 & (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2.(m2\_subset\_1 \\
 & X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1))
 \end{aligned} \tag{3}$$

Assume the following.

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

Assume the following.

$$(\neg v1\_xboole\_0 \ k4\_ordinal1) \wedge (v3\_ordinal1 \ k4\_ordinal1) \quad (5)$$

Assume the following.

$$v6\_membered \ k4\_ordinal1 \quad (6)$$

Assume the following.

$$\neg v1\_xboole\_0 \ k1\_numbers \quad (7)$$

Assume the following.

$$\forall X0.(l1\_normsp\_1 \ X0) \Rightarrow ((l1\_rlvect\_1 \ X0) \wedge (l2\_normsp\_0 \ X0)) \quad (8)$$

Assume the following.

$$m1\_subset\_1 \ k5\_numbers \ (k1\_zfmisc\_1 \ k1\_numbers) \quad (9)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 \ X0) \Rightarrow ((\neg v2\_struct\_0 \ (k4\_real\_ns1 \ X0)) \wedge ((v1\_normsp\_1 \ (k4\_real\_ns1 \ X0)) \wedge (l1\_normsp\_1 \ (k4\_real\_ns1 \ X0)))) \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v7\_ordinal1 \ X0) \wedge (v7\_ordinal1 \ X1)) \Rightarrow ( \\ & (v1\_funct\_1 \ (k4\_pdiff\_1 \ X0 \ X1)) \wedge ((v1\_funct\_2 \ (k4\_pdiff\_1 \ X0 \ X1) \\ & (u1\_struct\_0 \ (k4\_real\_ns1 \ X1)) \ (u1\_struct\_0 \ (k4\_real\_ns1 \ np\_1)))) \wedge \\ & (m1\_subset\_1 \ (k4\_pdiff\_1 \ X0 \ X1) \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ (u1\_struct\_0 \\ & (k4\_real\_ns1 \ X1)) \ (u1\_struct\_0 \ (k4\_real\_ns1 \ np\_1)))))) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 \ X0) \wedge (l1\_rlvect\_1 \ X0)) \Rightarrow (\forall X1. \\ & ((\neg v2\_struct\_0 \ X1) \wedge (l1\_rlvect\_1 \ X1)) \Rightarrow (\forall X2.((v1\_funct\_1 \\ & X2) \wedge ((v1\_funct\_2 \ X2 \ (u1\_struct\_0 \ X0) \ (u1\_struct\_0 \ X1)) \wedge (m1\_subset\_1 \\ & X2 \ (k1\_zfmisc\_1 \ (k2\_zfmisc\_1 \ (u1\_struct\_0 \ X0) \ (u1\_struct\_0 \ X1)))))) \Rightarrow \\ & ((v1\_lopban\_1 \ X2 \ X0 \ X1) \Leftrightarrow (\forall X3.(m1\_subset\_1 \ X3 \ (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X4.(m1\_subset\_1 \ X4 \ k1\_numbers) \Rightarrow (k3\_funct\_2 \ (u1\_struct\_0 \\ & X0) \ (u1\_struct\_0 \ X1) \ X2 \ (k1\_rlvect\_1 \ X0 \ X3 \ X4) = k1\_rlvect\_1 \ X1 \ (k3\_funct\_2 \\ & (u1\_struct\_0 \ X0) \ (u1\_struct\_0 \ X1) \ X2 \ X3) \ X4)))))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 \ X0 \ k4\_ordinal1) \Rightarrow (v7\_ordinal1 \ X0) \quad (13)$$

Assume the following.

$$\forall X0.(v6\_membered \ X0) \Rightarrow (\forall X1.(m1\_subset\_1 \ X1 \ X0) \Rightarrow (v7\_ordinal1 \ X1)) \quad (14)$$

**Theorem 1**

$$\forall X0.((\neg v1\_xboole\_0 X0) \wedge (m2\_subset\_1 X0 k1\_numbers k5\_numbers)) \Rightarrow \\ (\forall X1.(m2\_subset\_1 X1 k1\_numbers k5\_numbers) \Rightarrow (v1\_lopban\_1 \\ (k4\_pdf\_1 X1 X0) (k4\_real\_ns1 X0) (k4\_real\_ns1 np\_1)))$$