

# t16\_pdiff\_1 (TMUaLPngnrDwECoYB- syJMvm4wBTweqVLPe)

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Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_real\_ns1 : \iota \Rightarrow \iota$  be given. Let  $k1\_euclid : \iota \Rightarrow \iota$  be given. Let  $m2\_finseq\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r2\_pdiff\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r4\_pdiff\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1\_xboole\_0 X0) \wedge (m2\_subset\_1 X0 k1\_numbers k5\_numbers)) \Rightarrow \\
& (\forall X1.((\neg v1\_xboole\_0 X1) \wedge (m2\_subset\_1 X1 k1\_numbers k5\_numbers)) \Rightarrow \\
& \quad (\forall X2.(m2\_subset\_1 X2 k1\_numbers k5\_numbers) \Leftrightarrow (\forall X3. \\
& \quad \quad ((v1\_funct\_1 X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 ( \\
& \quad \quad \quad k1\_euclid X0) (k1\_euclid X1)))))) \Rightarrow (\forall X4.(m2\_finseq\_2 X4 \\
& \quad \quad k1\_numbers (k1\_euclid X0)) \Rightarrow (r4\_pdiff\_1 X0 X1 X2 X3 X4) \Leftrightarrow (\exists X5. \\
& \quad \quad ((v1\_funct\_1 X5) \wedge (m1\_subset\_1 X5 (k1\_zfmisc\_1 (k2\_zfmisc\_1 ( \\
& \quad \quad \quad u1\_struct\_0 (k4\_real\_ns1 X0)) (u1\_struct\_0 (k4\_real\_ns1 X1)))))) \wedge \\
& \quad \quad (\exists X6.(m1\_subset\_1 X6 (u1\_struct\_0 (k4\_real\_ns1 X0)))) \wedge \\
& \quad \quad ((X3 = X5) \wedge ((X4 = X6) \wedge (r2\_pdiff\_1 X1 X0 X2 X5 X6))))))))) \quad (1)
\end{aligned}$$

## Theorem 1

$$\begin{aligned}
& \forall X0.(m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\
& \quad ((\neg v1\_xboole\_0 X1) \wedge (m2\_subset\_1 X1 k1\_numbers k5\_numbers)) \Rightarrow \\
& (\forall X2.((\neg v1\_xboole\_0 X2) \wedge (m2\_subset\_1 X2 k1\_numbers k5\_numbers)) \Rightarrow \\
& (\forall X3.((v1\_funct\_1 X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& \quad (u1\_struct\_0 (k4\_real\_ns1 X1)) (u1\_struct\_0 (k4\_real\_ns1 X2)))))) \Rightarrow \\
& (\forall X4.((v1\_funct\_1 X4) \wedge (m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& \quad (k1\_euclid X1) (k1\_euclid X2)))))) \Rightarrow (\forall X5.(m1\_subset\_1 X5 \\
& \quad (u1\_struct\_0 (k4\_real\_ns1 X1))) \Rightarrow (\forall X6.(m2\_finseq\_2 X6 \\
& \quad k1\_numbers (k1\_euclid X1)) \Rightarrow (((X3 = X4) \wedge (X5 = X6)) \Rightarrow ((r2\_pdiff\_1 \\
& \quad X2 X1 X0 X3 X5) \Leftrightarrow (r4\_pdiff\_1 X1 X2 X0 X4 X6)))))))))
\end{aligned}$$