

## t50\_chain\_1

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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  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_chain\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_euclid : \iota \Rightarrow \iota$  be given. Let  $k4\_chain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k9\_chain\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. ((\neg v1\_xboole\_0 X0) \wedge (m2\_subset\_1 X0 k1\_numbers k5\_numbers)) \Rightarrow \\
 & \quad (\forall X1. (m1\_chain\_1 X1 X0) \Rightarrow (\forall X2. (m2\_subset\_1 X2 k1\_numbers \\
 & \quad \quad k5\_numbers) \Rightarrow (\forall X3. (m2\_subset\_1 X3 (k1\_zfmisc\_1 (k1\_euclid \\
 & X0)) (k4\_chain\_1 X0 X1 X2)) \Rightarrow (k9\_chain\_1 X0 X1 X2 X3 = ReplSep (toset \\
 & (\lambda X4 : \iota. m2\_subset\_1 X4 (k1\_zfmisc\_1 (k1\_euclid X0)) (k4\_chain\_1 \\
 & X0 X1 (k2\_nat\_1 X2 np\_1)))))) (\lambda X4 : \iota. r1\_tarski X3 X4) (\lambda X4 : \\
 & \quad \quad \quad \iota. X4))))))
 \end{aligned} \tag{1}$$

### Theorem 1

$$\begin{aligned}
 & \forall X0. (m2\_subset\_1 X0 k1\_numbers k5\_numbers) \Rightarrow (\forall X1. \\
 & ((\neg v1\_xboole\_0 X1) \wedge (m2\_subset\_1 X1 k1\_numbers k5\_numbers)) \Rightarrow \\
 & (\forall X2. (m1\_chain\_1 X2 X1) \Rightarrow (\forall X3. (m2\_subset\_1 X3 (k1\_zfmisc\_1 \\
 & (k1\_euclid X1)) (k4\_chain\_1 X1 X2 X0)) \Rightarrow (\forall X4. (m2\_subset\_1 \\
 & X4 (k1\_zfmisc\_1 (k1\_euclid X1)) (k4\_chain\_1 X1 X2 (k2\_nat\_1 X0 np\_1)))) \Rightarrow \\
 & ((X4 \in k9\_chain\_1 X1 X2 X0 X3) \Leftrightarrow (r1\_tarski X3 X4))))))
 \end{aligned}$$