

# t14\_normsp\_2 (TMYyzRQieiUDG- WKB6VE9pAHFCEqGq2ZKqEW)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v13\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v2\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v4\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v5\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v6\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v7\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v8\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_normsp\_0 : \iota \Rightarrow o$  be given. Let  $v4\_normsp\_0 : \iota \Rightarrow o$  be given. Let  $v2\_normsp\_1 : \iota \Rightarrow o$  be given. Let  $l1\_normsp\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  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  $k3\_normsp\_2 : \iota \Rightarrow \iota$  be given. Let  $r1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_frechet : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_frechet : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_normsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_frechet2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_normsp\_2 : \iota \Rightarrow \iota$  be given. Let  $v2\_tbsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_tbsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v6\_metric\_1 : \iota \Rightarrow o$  be given. Let  $v7\_metric\_1 : \iota \Rightarrow o$  be given. Let  $v8\_metric\_1 : \iota \Rightarrow o$  be given. Let  $v9\_metric\_1 : \iota \Rightarrow o$  be given. Let  $l1\_metric\_1 : \iota \Rightarrow o$  be given. Let  $k3\_pcomps\_1 : \iota \Rightarrow \iota$  be given. Let  $v2\_pre\_topc : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $v8\_pre\_topc : \iota \Rightarrow o$  be given. Let  $r1\_frechet : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Let  $v2\_tops\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $g1\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $g1\_metric\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $l2\_normsp\_0 : \iota \Rightarrow o$  be given. Let  $l1\_normsp\_0 : \iota \Rightarrow o$  be given. Let  $l2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $k2\_pcomps\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_normsp\_2 : \iota \Rightarrow \iota$  be given. Let  $v1\_metric\_1 : \iota \Rightarrow o$  be given. Let  $u1\_pre\_topc : \iota \Rightarrow \iota$  be given. Let  $u1\_metric\_1 : \iota \Rightarrow \iota$  be given. Assume the

following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\
& X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v5\_rlvect\_1 X0) \wedge \\
& ((v6\_rlvect\_1 X0) \wedge ((v7\_rlvect\_1 X0) \wedge ((v8\_rlvect\_1 X0) \wedge ((v3\_normsp\_0 \\
& X0) \wedge ((v4\_normsp\_0 X0) \wedge ((v2\_normsp\_1 X0) \wedge (l1\_normsp\_1 X0)))))))))) \Rightarrow \\
& (\forall X1.((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 \\
& X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\
& X0)))))) \Rightarrow (\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers \\
& (u1\_struct\_0 (k2\_normsp\_2 X0)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\
& (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 (k2\_normsp\_2 X0)))))) \Rightarrow \\
& (((r1\_funct\_2 k5\_numbers (u1\_struct\_0 X0) k5\_numbers (u1\_struct\_0 \\
& (k2\_normsp\_2 X0)) X1 X2) \wedge (v2\_tbsp\_1 X2 (k2\_normsp\_2 X0))) \Rightarrow (k1\_tbsp\_1 \\
& (k2\_normsp\_2 X0) X2 = k6\_normsp\_1 X0 X1))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((X0 \in X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X2))) \Rightarrow (m1\_subset\_1 X0 X2) \tag{2}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v6\_metric\_1 X0) \wedge ((v7\_metric\_1 \\
& X0) \wedge ((v8\_metric\_1 X0) \wedge ((v9\_metric\_1 X0) \wedge (l1\_metric\_1 X0)))))) \Rightarrow \\
& (\forall X1.((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 \\
& X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\
& X0)))))) \Rightarrow (\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers \\
& (u1\_struct\_0 (k3\_pcomps\_1 X0)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\
& (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 (k3\_pcomps\_1 X0)))))) \Rightarrow \\
& (((r1\_funct\_2 k5\_numbers (u1\_struct\_0 X0) k5\_numbers (u1\_struct\_0 \\
& (k3\_pcomps\_1 X0)) X1 X2) \wedge (v2\_tbsp\_1 X1 X0)) \Rightarrow (k1\_tbsp\_1 X0 X1 = k2\_frechet2 \\
& (k3\_pcomps\_1 X0) X2))))))
\end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v6\_metric\_1 X0) \wedge ((v7\_metric\_1 \\
& X0) \wedge ((v8\_metric\_1 X0) \wedge ((v9\_metric\_1 X0) \wedge (l1\_metric\_1 X0)))))) \Rightarrow \\
& (\forall X1.((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 \\
& X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\
& X0)))))) \Rightarrow (\forall X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers \\
& (u1\_struct\_0 (k3\_pcomps\_1 X0)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\
& (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 (k3\_pcomps\_1 X0)))))) \Rightarrow \\
& (((r1\_funct\_2 k5\_numbers (u1\_struct\_0 X0) k5\_numbers (u1\_struct\_0 \\
& (k3\_pcomps\_1 X0)) X1 X2) \Rightarrow ((v2\_tbsp\_1 X1 X0) \Leftrightarrow (v2\_frechet X2 (k3\_pcomps\_1 \\
& X0))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow ((v8\_pre\_topc X0) \Rightarrow (\forall X1.((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 \\ & X1 k5\_numbers (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 X0)))))) \Rightarrow (\forall X2.( \\ & m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow ((r1\_frechet X0 X1 X2) \Leftrightarrow ((v2\_frechet \\ & X1 X0) \wedge (X2 = k2\_frechet2 X0 X1)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & ((\neg v1\_xboole\_0 X1) \wedge ((\neg v1\_xboole\_0 X3) \wedge (((v1\_funct\_1 X4) \wedge (( \\ & v1\_funct\_2 X4 X0 X1) \wedge (m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X1)))))) \wedge ((v1\_funct\_1 X5) \wedge ((v1\_funct\_2 X5 X2 X3) \wedge (m1\_subset\_1 \\ & X5 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X2 X3)))))) \Rightarrow ((r1\_funct\_2 X0 X1 \\ & X2 X3 X4 X5) \Leftrightarrow (X4 = X5)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge (m1\_subset\_1 X1 X0)) \Rightarrow \\ & (k6\_domain\_1 X0 X1 = k1\_tarski X1) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc \\ & X0))) \Rightarrow (\exists X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0))) \wedge ((\neg v1\_xboole\_0 X1) \wedge (\neg v2\_tops\_1 X1 X0))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_zfmisc\_1 \\ & X0))) \Rightarrow (\forall X2. \forall X3. (g1\_pre\_topc X0 X1 = g1\_pre\_topc \\ & X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 (k2\_zfmisc\_1 \\ & X0 X0) k1\_numbers) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X0) k1\_numbers)))))) \Rightarrow (\forall X2. \forall X3. ( \\ & g1\_metric\_1 X0 X1 = g1\_metric\_1 X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\neg v1\_xboole\_0 \\ & (u1\_struct\_0 X0)) \end{aligned} \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1\_metric\_1 X0) \Rightarrow ((v1\_pre\_topc (k3\_pcomps\_1 X0)) \wedge \\ & (v2\_pre\_topc (k3\_pcomps\_1 X0))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v6\_metric\_1 X0) \wedge ((v7\_metric\_1 X0) \wedge ((v8\_metric\_1 X0) \wedge ((v9\_metric\_1 X0) \wedge (l1\_metric\_1 X0)))))) \Rightarrow (v8\_pre\_topc (k3\_pcomps\_1 X0)) \quad (13)$$

Assume the following.

$$\forall X0.(l2\_normsp\_0 X0) \Rightarrow ((l1\_normsp\_0 X0) \wedge (l2\_struct\_0 X0)) \quad (14)$$

Assume the following.

$$\forall X0.(l1\_normsp\_1 X0) \Rightarrow ((l1\_rlvect\_1 X0) \wedge (l2\_normsp\_0 X0)) \quad (15)$$

Assume the following.

$$\forall X0.(l1\_normsp\_0 X0) \Rightarrow (l1\_struct\_0 X0) \quad (16)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v5\_rlvect\_1 X0) \wedge ((v6\_rlvect\_1 X0) \wedge ((v7\_rlvect\_1 X0) \wedge ((v8\_rlvect\_1 X0) \wedge ((v3\_normsp\_0 X0) \wedge ((v4\_normsp\_0 X0) \wedge ((v2\_normsp\_1 X0) \wedge (l1\_normsp\_1 X0)))))))))))))) \Rightarrow ((\neg v2\_struct\_0 (k3\_normsp\_2 X0)) \wedge ((v2\_pre\_topc (k3\_normsp\_2 X0)) \wedge (l1\_pre\_topc (k3\_normsp\_2 X0)))) \quad (17)$$

Assume the following.

$$\forall X0.(l1\_metric\_1 X0) \Rightarrow (m1\_subset\_1 (k2\_pcomps\_1 X0) (k1\_zfmisc\_1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))) \quad (18)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v5\_rlvect\_1 X0) \wedge ((v6\_rlvect\_1 X0) \wedge ((v7\_rlvect\_1 X0) \wedge ((v8\_rlvect\_1 X0) \wedge ((v3\_normsp\_0 X0) \wedge ((v4\_normsp\_0 X0) \wedge ((v2\_normsp\_1 X0) \wedge (l1\_normsp\_1 X0)))))))))))))) \Rightarrow ((\neg v2\_struct\_0 (k2\_normsp\_2 X0)) \wedge ((v6\_metric\_1 (k2\_normsp\_2 X0)) \wedge ((v7\_metric\_1 (k2\_normsp\_2 X0)) \wedge ((v8\_metric\_1 (k2\_normsp\_2 X0)) \wedge ((v9\_metric\_1 (k2\_normsp\_2 X0)) \wedge (l1\_metric\_1 (k2\_normsp\_2 X0))))))) \quad (19)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc X0) \wedge (l1\_pre\_topc X0))) \wedge ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 X0))))))) \Rightarrow (m1\_subset\_1 (k2\_frechet2 X0 X1) (u1\_struct\_0 X0)) \quad (20)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2\_struct\_0 X0) \wedge (l1\_pre\_topc X0)) \wedge \\ & ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 X0)) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\ & X0)))))) \Rightarrow (m1\_subset\_1 (k2\_frechet X0 X1) (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0)))) \end{aligned} \quad (21)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v5\_rlvect\_1 X0) \wedge \\ & ((v6\_rlvect\_1 X0) \wedge ((v7\_rlvect\_1 X0) \wedge ((v8\_rlvect\_1 X0) \wedge ((v3\_normsp\_0 \\ & X0) \wedge ((v4\_normsp\_0 X0) \wedge ((v2\_normsp\_1 X0) \wedge (l1\_normsp\_1 X0)))))))))) \Rightarrow \\ & ((v1\_funct\_1 (k1\_normsp\_2 X0)) \wedge ((v1\_funct\_2 (k1\_normsp\_2 X0) \\ & (k2\_zfmisc\_1 (u1\_struct\_0 X0) (u1\_struct\_0 X0)) k1\_numbers) \wedge \\ & (m1\_subset\_1 (k1\_normsp\_2 X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 \\ & (u1\_struct\_0 X0) (u1\_struct\_0 X0)) k1\_numbers)))))) \end{aligned} \quad (22)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 (k2\_zfmisc\_1 \\ & X0 X0) k1\_numbers) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X0) k1\_numbers)))) \Rightarrow ((v1\_metric\_1 (g1\_metric\_1 \\ & X0 X1)) \wedge (l1\_metric\_1 (g1\_metric\_1 X0 X1))) \end{aligned} \quad (23)$$

Assume the following.

$$\forall X0. (l1\_metric\_1 X0) \Rightarrow (k3\_pcomps\_1 X0 = g1\_pre\_topc (u1\_struct\_0 X0) (k2\_pcomps\_1 X0)) \quad (24)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_pre\_topc X0)) \Rightarrow (\forall X1. \\ & ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 X0)) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\ & X0)))))) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 \\ & X0))) \Rightarrow ((X2 = k2\_frechet X0 X1) \Leftrightarrow (\forall X3. (m1\_subset\_1 X3 (u1\_struct\_0 \\ & X0)) \Rightarrow ((X3 \in X2) \Leftrightarrow (r1\_frechet X0 X1 X3)))))) \end{aligned} \quad (25)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v5\_rlvect\_1 X0) \wedge \\ & ((v6\_rlvect\_1 X0) \wedge ((v7\_rlvect\_1 X0) \wedge ((v8\_rlvect\_1 X0) \wedge ((v3\_normsp\_0 \\ & X0) \wedge ((v4\_normsp\_0 X0) \wedge ((v2\_normsp\_1 X0) \wedge (l1\_normsp\_1 X0)))))))))) \Rightarrow \\ & (k3\_normsp\_2 X0 = k3\_pcomps\_1 (k2\_normsp\_2 X0)) \end{aligned} \quad (26)$$

Assume the following.

$$\begin{aligned} \forall X0. (& (\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v5\_rlvect\_1 X0) \wedge \\ & ((v6\_rlvect\_1 X0) \wedge ((v7\_rlvect\_1 X0) \wedge ((v8\_rlvect\_1 X0) \wedge ((v3\_normsp\_0 \\ & X0) \wedge ((v4\_normsp\_0 X0) \wedge ((v2\_normsp\_1 X0) \wedge (l1\_normsp\_1 X0)))))))))) \Rightarrow \\ & (k2\_normsp\_2 X0 = g1\_metric\_1 (u1\_struct\_0 X0) (k1\_normsp\_2 X0)) \end{aligned} \quad (27)$$

Assume the following.

$$\forall X0. \forall X1. (X1 = k1\_tarski X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (X2 = X0)) \quad (28)$$

Assume the following.

$$\forall X0. (v1\_xboole\_0 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (v1\_xboole\_0 X1)) \quad (29)$$

Assume the following.

$$\forall X0. (l1\_pre\_topc X0) \Rightarrow ((v1\_pre\_topc X0) \Rightarrow (X0 = g1\_pre\_topc (u1\_struct\_0 X0) (u1\_pre\_topc X0))) \quad (30)$$

Assume the following.

$$\forall X0. (l1\_metric\_1 X0) \Rightarrow ((v1\_metric\_1 X0) \Rightarrow (X0 = g1\_metric\_1 (u1\_struct\_0 X0) (u1\_metric\_1 X0))) \quad (31)$$

### Theorem 1

$$\begin{aligned} \forall X0. (& (\neg v2\_struct\_0 X0) \wedge ((v13\_algstr\_0 X0) \wedge ((v2\_rlvect\_1 \\ & X0) \wedge ((v3\_rlvect\_1 X0) \wedge ((v4\_rlvect\_1 X0) \wedge ((v5\_rlvect\_1 X0) \wedge \\ & ((v6\_rlvect\_1 X0) \wedge ((v7\_rlvect\_1 X0) \wedge ((v8\_rlvect\_1 X0) \wedge ((v3\_normsp\_0 \\ & X0) \wedge ((v4\_normsp\_0 X0) \wedge ((v2\_normsp\_1 X0) \wedge (l1\_normsp\_1 X0)))))))))) \Rightarrow \\ & (\forall X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 k5\_numbers (u1\_struct\_0 \\ & X0)) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 \\ & X0)))))) \Rightarrow (\forall X2. ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers \\ & (u1\_struct\_0 (k3\_normsp\_2 X0)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 k5\_numbers (u1\_struct\_0 (k3\_normsp\_2 X0)))))) \Rightarrow \\ & (((r1\_funct\_2 k5\_numbers (u1\_struct\_0 X0) k5\_numbers (u1\_struct\_0 \\ & (k3\_normsp\_2 X0)) X1 X2) \wedge (v2\_frechet X2 (k3\_normsp\_2 X0))) \Rightarrow (( \\ & k2\_frechet (k3\_normsp\_2 X0) X2 = k6\_domain\_1 (u1\_struct\_0 X0) ( \\ & k6\_normsp\_1 X0 X1)) \wedge (k2\_frechet2 (k3\_normsp\_2 X0) X2 = k6\_normsp\_1 \\ & X0 X1)))))) \end{aligned}$$