

t21\_tbsp\_1 (TMQpFPNS-  
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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v6\_metric\_1 : \iota \Rightarrow o$  be given. Let  $l1\_metric\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v6\_tbsp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k3\_tbsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $r1\_tarSKI : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_metric\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (1)$$

Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X0 (k1\_zfmisc\_1 X1)) \Leftrightarrow (r1\_tarSKI X0 X1) \quad (3)$$

Assume the following.

$$\forall X0.(l1\_metric\_1 X0) \Rightarrow ((\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (k2\_metric\_1 X0 X1 X1 = k6\_numbers)) \Leftrightarrow (v6\_metric\_1 X0)) \quad (4)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (5)$$

Assume the following.

$$\exists X0.(v1\_xboole\_0 X0) \wedge ((v1\_xcmplx\_0 X0) \wedge ((v1\_xxreal\_0 X0) \wedge (v1\_xreal\_0 X0))) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(((\neg v2\_struct\_0 X0)\wedge((v6\_metric\_1 X0)\wedge(l1\_metric\_1 X0)))\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0))))\Rightarrow(m1\_subset\_1 (k3\_tbsp\_1 X0 X1) k1\_numbers) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0)\wedge((v6\_metric\_1 X0)\wedge(l1\_metric\_1 X0)))\Rightarrow(\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))\Rightarrow((v6\_tbsp\_1 X1 X0)\Rightarrow(\forall X2.(m1\_subset\_1 X2 k1\_numbers)\Rightarrow \\ & (((X1\neq k1\_xboole\_0)\Rightarrow((X2 = k3\_tbsp\_1 X0 X1)\Leftrightarrow((\forall X3.(m1\_subset\_1 X3 (u1\_struct\_0 X0))\Rightarrow(\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 X0))\Rightarrow(((X3 \in X1)\wedge(X4 \in X1))\Rightarrow(r1\_xxreal\_0 (k2\_metric\_1 X0 X3 X4 X2))))\wedge(\forall X3.(m1\_subset\_1 X3 k1\_numbers)\Rightarrow((\forall X4. \\ & (m1\_subset\_1 X4 (u1\_struct\_0 X0))\Rightarrow(\forall X5.(m1\_subset\_1 X5 (u1\_struct\_0 X0))\Rightarrow(((X4 \in X1)\wedge(X5 \in X1))\Rightarrow(r1\_xxreal\_0 (k2\_metric\_1 X0 X4 X5) X3))))\Rightarrow(r1\_xxreal\_0 X2 X3))))))\wedge((X1 = k1\_xboole\_0)\Rightarrow \\ & ((X2 = k3\_tbsp\_1 X0 X1)\Leftrightarrow(X2 = k6\_numbers)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski X0 X1)\Leftrightarrow(\forall X2.(X2 \in X0)\Rightarrow(X2 \in X1)) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 X0)\wedge(v1\_xxreal\_0 X1))\Rightarrow((r1\_xxreal\_0 X0 X1)\vee(r1\_xxreal\_0 X1 X0)) \quad (10)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))\Rightarrow(v1\_xboole\_0 X1)) \quad (11)$$

**Theorem 1**

$$\forall X0.((\neg v2\_struct\_0 X0)\wedge((v6\_metric\_1 X0)\wedge(l1\_metric\_1 X0)))\Rightarrow(\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))\Rightarrow((v6\_tbsp\_1 X1 X0)\Rightarrow(r1\_xxreal\_0 k6\_numbers (k3\_tbsp\_1 X0 X1))))$$