t30_pcomps_1 (TMKGjHwD-kKBQac5aHYFVPgckL1RimCuLeqB)

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Let $l1\_metric\_1 : \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k2\_pcomps\_1 : \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_numbers : \iota$ be given. Let $k9\_metric\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1\ X0\ (k1\_zfmisc\_1\ X1)) \Leftrightarrow (r1\_tarski\ X0\ X1) \tag{1}$$

Assume the following.

$$\forall X0.(l1\_metric\_1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\exists X2.(m1\_subset\_1\ X2\ k1\_numbers) \wedge ((\neg r1\_xxreal\_0\ X2\ k6\_numbers) \wedge (r1\_tarski\ (k9\_metric\_1\ X0\ X1\ X2)\ (u1\_struct\_0\ X0))))) \tag{2}$$

Assume the following.

$$\forall X0.(l1\_metric\_1\ X0) \Rightarrow (m1\_subset\_1\ (k2\_pcomps\_1\ X0)\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \tag{3}$$

Assume the following.

$$\forall X0.(l1\_metric\_1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0)))) \Rightarrow ((X1 = k2\_pcomps\_1\ X0) \Leftrightarrow (\forall X2.(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (u1\_struct\_0\ X0))) \Rightarrow ((X2 \in X1) \Leftrightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow (\neg(X3 \in X2) \wedge (\forall X4.(m1\_subset\_1\ X4\ k1\_numbers) \Rightarrow (\neg(\neg r1\_xxreal\_0\ X4\ k6\_numbers) \wedge (r1\_tarski\ (k9\_metric\_1\ X0\ X3\ X4)\ X2)))))))))) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1\_tarski\ X0\ X1) \wedge (r1\_tarski\ X1\ X0)) \tag{5}$$

Theorem 1 $\forall X0.(l1\_metric\_1\ X0) \Rightarrow (u1\_struct\_0\ X0 \in k2\_pcomps\_1\ X0)$.