t4_partit1 (TMSAHmfr-TuGo7KwyhrnLUgpRJxdVU1LQ9DM)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m1\_eqrel\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_setfam\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_eqrel\_1\ X1\ X0) \Rightarrow (\forall X2.(m1\_eqrel\_1\ X2\ X0) \Rightarrow (((r1\_setfam\_1\ X2\ X1) \wedge (r1\_setfam\_1\ X1\ X2)) \Rightarrow (r1\_tarski\ X2\ X1)))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(X0 = X1) \Leftrightarrow ((r1\_tarski\ X0\ X1) \wedge (r1\_tarski\ X1\ X0)) \tag{2}$$

Theorem 1

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (\forall X1.(m1\_eqrel\_1\ X1\ X0) \Rightarrow (\forall X2.(m1\_eqrel\_1\ X2\ X0) \Rightarrow (((r1\_setfam\_1\ X2\ X1) \wedge (r1\_setfam\_1\ X1\ X2)) \Rightarrow (X1 = X2))))$$