

## t3\_partit1

(TMVpyH1cNj5Unm9Jbsj3K8KznnVawmE87pk)

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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.

$$\forall X0. \forall X1. \forall X2. ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X2)) \Rightarrow (r1\_tarski X0 X2) \quad (1)$$

Assume the following.

$$\forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (m1\_eqrel\_1 X1 X0) \Rightarrow (\forall X2. \forall X3. ((X2 \in X1) \wedge ((X3 \in X1) \wedge (r1\_tarski X2 X3))) \Rightarrow (X2 = X3))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (r1\_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (r1\_setfam\_1 X0 X1) \Leftrightarrow (\forall X2. \neg (X2 \in X0) \wedge (\forall X3. \neg (X3 \in X1) \wedge (r1\_tarski X2 X3))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (X0 = X1) \Leftrightarrow ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X0)) \quad (5)$$

**Theorem 1**

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