

## t25\_partit1

(TMTCH1qaELRPMuew6tfPWktRuSW44RgUxhq)

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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  $k4\_partit1 : \iota \Rightarrow \iota \Rightarrow \iota$  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.

$$\begin{aligned} & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (m1\_eqrel\_1 X1 X0) \Rightarrow \\ & (\forall X2. (m1\_eqrel\_1 X2 X0) \Rightarrow (((r1\_setfam\_1 X2 X1) \wedge (r1\_setfam\_1 \\ & X1 X2)) \Rightarrow (X1 = X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (m1\_eqrel\_1 X1 X0) \Rightarrow \\ & (\forall X2. (m1\_eqrel\_1 X2 X0) \Rightarrow ((r1\_setfam\_1 X1 X2) \Leftrightarrow (r1\_tarski \\ & (k4\_partit1 X0 X1) (k4\_partit1 X0 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (X0 = X1) \Leftrightarrow ((r1\_tarski X0 X1) \wedge (r1\_tarski X1 X0)) \quad (3)$$

### Theorem 1

$$\begin{aligned} & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (m1\_eqrel\_1 X1 X0) \Rightarrow \\ & (\forall X2. (m1\_eqrel\_1 X2 X0) \Rightarrow ((k4\_partit1 X0 X1 = k4\_partit1 \\ & X0 X2) \Rightarrow (X1 = X2)))) \end{aligned}$$