

l3\_jordan  
(TMGVbxF4gkR6sPN5BzVGDLzWthLfcYDfqza)

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Let  $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. (\neg(\neg r1\_xboole\_0 X0 (k2\_xboole\_0 X1 X2))) \wedge ((r1\_xboole\_0 X0 X1) \wedge (r1\_xboole\_0 X0 X2)) \wedge (\neg(\neg(r1\_xboole\_0 X0 X1) \wedge (r1\_xboole\_0 X0 X2))) \wedge (r1\_xboole\_0 X0 (k2\_xboole\_0 X1 X2))) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (r1\_xboole\_0 X0 X1) \Rightarrow (r1\_xboole\_0 X1 X0) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. k2\_xboole\_0 X0 X1 = k2\_xboole\_0 X1 X0 \quad (3)$$

**Theorem 1**

$$\forall X0. \forall X1. \forall X2. \forall X3. \forall X4. ((r1\_xboole\_0 X0 X4) \wedge ((r1\_xboole\_0 X1 X4) \wedge ((r1\_xboole\_0 X2 X4) \wedge (r1\_xboole\_0 X3 X4)))) \Rightarrow (r1\_xboole\_0 (k2\_xboole\_0 (k2\_xboole\_0 (k2\_xboole\_0 X0 X1) X2) X3) X4)$$