

t94\_xboole\_1 (TMRJxWKD-  
njQN5gGpjggqABn9PwCgtUxABWj)

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Let  $k2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. k2\_xboole\_0 X0 X1 = k2\_xboole\_0 (k5\_xboole\_0 X0 X1) (k3\_xboole\_0 X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (r1\_xboole\_0 X0 X1) \Leftrightarrow (k4\_xboole\_0 X0 X1 = X0) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. (r1\_xboole\_0 X0 X1) \Rightarrow (r1\_xboole\_0 X1 X0) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. r1\_xboole\_0 (k3\_xboole\_0 X0 X1) (k5\_xboole\_0 X0 X1) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. k5\_xboole\_0 X0 X1 = k2\_xboole\_0 (k4\_xboole\_0 X0 X1) (k4\_xboole\_0 X1 X0) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. k2\_xboole\_0 X0 X1 = k2\_xboole\_0 X1 X0 \quad (6)$$

**Theorem 1**

$$\forall X0. \forall X1. k2\_xboole\_0 X0 X1 = k5\_xboole\_0 (k5\_xboole\_0 X0 X1) (k3\_xboole\_0 X0 X1)$$