

t55_xboole_1

(TMbLcgVETmqbtVE7AJbaiue145JGbARmrs4)

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Let $k4_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. k4_xboole_0 (k2_xboole_0 X0 X1) X1 = k4_xboole_0 X0 X1 \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. k4_xboole_0 X0 (k3_xboole_0 X1 X2) = k2_xboole_0 (k4_xboole_0 X0 X1) (k4_xboole_0 X0 X2) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. k2_xboole_0 X0 X1 = k2_xboole_0 X1 X0 \quad (3)$$

Theorem 1

$$\forall X0. \forall X1. k4_xboole_0 (k2_xboole_0 X0 X1) (k3_xboole_0 X0 X1) = k2_xboole_0 (k4_xboole_0 X0 X1) (k4_xboole_0 X1 X0)$$