

t16\_sysrel (TMPQscQJGtRP-  
WQCi6QbXWs7aUEV96UKX6PA)

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Let  $k6\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_relat\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. 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.

$$\forall X0. \forall X1. k4\_xboole\_0 X0 (k2\_xboole\_0 X0 X1) = k1\_xboole\_0 \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. k4\_xboole\_0 (k4\_xboole\_0 X0 \\ X1) X2 = k4\_xboole\_0 X0 (k2\_xboole\_0 X1 X2) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (k4\_relat\_1 (k2\_xboole\_0 X0 X1) = k2\_xboole\_0 \\ (k4\_relat\_1 X0) (k4\_relat\_1 X1)) \wedge ((k4\_relat\_1 (k3\_xboole\_0 X0 \\ X1) = k3\_xboole\_0 (k4\_relat\_1 X0) (k4\_relat\_1 X1)) \wedge (k4\_relat\_1 \\ (k6\_subset\_1 X0 X1) = k6\_subset\_1 (k4\_relat\_1 X0) (k4\_relat\_1 X1))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. k6\_subset\_1 X0 X1 = k4\_xboole\_0 X0 X1 \quad (4)$$

Assume the following.

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

**Theorem 1**

$$\begin{aligned} \forall X0. \forall X1. k6\_subset\_1 (k4\_relat\_1 (k6\_subset\_1 X0 \\ X1)) (k4\_relat\_1 X0) = k1\_xboole\_0 \end{aligned}$$