t30_sysrel (TMawZBfYzCevZB3akaxRAsNq1kAb9u5M3To)

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Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_relat\_1 : \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_sysrel : \iota \Rightarrow \iota$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k4\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.k4\_xboole\_0\ X0\ (k3\_xboole\_0\ X0\ X1) = k4\_xboole\_0\ X0\ X1 \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(v1\_relat\_1\ X2) \Rightarrow ((((k3\_relat\_1\ X2\ X2 = X2) \wedge ((k3\_relat\_1\ X2\ (k6\_subset\_1\ X2\ (k1\_sysrel\ X2)) = k1\_xboole\_0) \wedge (k4\_tarski\ X0\ X1 \in X2))) \Rightarrow ((X0 = X1) \vee ((X0 \in k6\_subset\_1\ (k9\_xtuple\_0\ X2)\ (k9\_xtuple\_0\ (k1\_sysrel\ X2))) \wedge (X1 \in k9\_xtuple\_0\ (k1\_sysrel\ X2))))) \wedge (((k3\_relat\_1\ X2\ X2 = X2) \wedge ((k3\_relat\_1\ (k6\_subset\_1\ X2\ (k1\_sysrel\ X2))\ X2 = k1\_xboole\_0) \wedge (k4\_tarski\ X0\ X1 \in X2))) \Rightarrow ((X0 = X1) \vee ((X1 \in k6\_subset\_1\ (k10\_xtuple\_0\ X2)\ (k9\_xtuple\_0\ (k1\_sysrel\ X2))) \wedge (X0 \in k9\_xtuple\_0\ (k1\_sysrel\ X2))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.k6\_subset\_1\ X0\ X1 = k4\_xboole\_0\ X0\ X1 \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.k4\_tarski\ X0\ X1 = k2\_tarski\ (k2\_tarski\ X0\ X1)\ (k1\_tarski\ X0) \tag{4}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0) \Rightarrow (k1\_sysrel\ X0 = k3\_xboole\_0\ X0\ (k4\_relat\_1\ (k9\_xtuple\_0\ X0))) \tag{5}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.(v1\_relat\_1\ X2)\Rightarrow((((k3\_relat\_1\ X2\ X2 = X2)\wedge((k3\_relat\_1\ X2\ (k6\_subset\_1\ X2\ (k4\_relat\_1\ (k9\_xtuple\_0\ X2))) = k1\_xboole\_0)\wedge(k4\_tarski\ X0\ X1 \in X2)))\Rightarrow((X0 = X1)\vee((X0 \in k6\_subset\_1\ (k9\_xtuple\_0\ X2)\ (k9\_xtuple\_0\ (k1\_sysrel\ X2)))\wedge(X1 \in k9\_xtuple\_0\ (k1\_sysrel\ X2)))))\wedge(((k3\_relat\_1\ X2\ X2 = X2)\wedge((k3\_relat\_1\ (k6\_subset\_1\ X2\ (k4\_relat\_1\ (k9\_xtuple\_0\ X2)))\ X2 = k1\_xboole\_0)\wedge(k4\_tarski\ X0\ X1 \in X2)))\Rightarrow((X0 = X1)\vee((X1 \in k6\_subset\_1\ (k10\_xtuple\_0\ X2)\ (k9\_xtuple\_0\ (k1\_sysrel\ X2)))\wedge(X0 \in k9\_xtuple\_0\ (k1\_sysrel\ X2))))))$$