

# t32\_sysrel (TMN- vnD2BUwM67xb7ECREs3Dt9Ec5B7Kjsys)

October 27, 2020

Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_sysrel : \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow (((X0 \in k9\_xtuple\_0 (k1\_sysrel \\
& X1)) \Rightarrow ((X0 \in k9\_xtuple\_0 X1) \wedge (k4\_tarski X0 X0 \in X1))) \wedge (((X0 \in k9\_xtuple\_0 \\
& X1) \wedge (k4\_tarski X0 X0 \in X1)) \Rightarrow (X0 \in k9\_xtuple\_0 (k1\_sysrel X1))) \wedge \\
& (((X0 \in k10\_xtuple\_0 (k1\_sysrel X1)) \Rightarrow ((X0 \in k9\_xtuple\_0 X1) \wedge (k4\_tarski \\
& X0 X0 \in X1))) \wedge (((X0 \in k9\_xtuple\_0 X1) \wedge (k4\_tarski X0 X0 \in X1)) \Rightarrow (X0 \in \\
& k10\_xtuple\_0 (k1\_sysrel X1))) \wedge (((X0 \in k10\_xtuple\_0 (k1\_sysrel \\
& X1)) \Rightarrow ((X0 \in k10\_xtuple\_0 X1) \wedge (k4\_tarski X0 X0 \in X1))) \wedge (((X0 \in k10\_xtuple\_0 \\
& X1) \wedge (k4\_tarski X0 X0 \in X1)) \Rightarrow (X0 \in k10\_xtuple\_0 (k1\_sysrel X1))) \wedge \\
& (((X0 \in k9\_xtuple\_0 (k1\_sysrel X1)) \Rightarrow ((X0 \in k10\_xtuple\_0 X1) \wedge (k4\_tarski \\
& X0 X0 \in X1))) \wedge (((X0 \in k10\_xtuple\_0 X1) \wedge (k4\_tarski X0 X0 \in X1)) \Rightarrow (X0 \in \\
& k9\_xtuple\_0 (k1\_sysrel X1)))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. (v1\_relat\_1 X0) \Rightarrow (k9\_xtuple\_0 (k1\_sysrel X0) = k10\_xtuple\_0 (k1\_sysrel X0)) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (r1\_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \tag{3}$$

## Theorem 1

$$\begin{aligned}
& \forall X0. (v1\_relat\_1 X0) \Rightarrow ((r1\_tarski (k9\_xtuple\_0 (k1\_sysrel \\
& X0)) (k9\_xtuple\_0 X0)) \wedge (r1\_tarski (k10\_xtuple\_0 (k1\_sysrel \\
& X0)) (k10\_xtuple\_0 X0)) \wedge (r1\_tarski (k10\_xtuple\_0 (k1\_sysrel \\
& X0)) (k9\_xtuple\_0 X0)) \wedge (r1\_tarski (k9\_xtuple\_0 (k1\_sysrel X0)) \\
& (k10\_xtuple\_0 X0))))
\end{aligned}$$