

# t7\_eqrel\_1 (TMbgN- HwDXg8X8xe6Be7cbGXboGXkY2oWM61)

October 27, 2020

Let  $v8\_relat\_2 : \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} \forall X0.(v1\_relat\_1 X0) \Rightarrow ((v8\_relat\_2 X0) \Leftrightarrow (\forall X1.\forall X2. \\ \forall X3.((k4\_tarski X1 X2 \in X0) \wedge (k4\_tarski X2 X3 \in X0)) \Rightarrow (k4\_tarski \\ X1 X3 \in X0))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2) \tag{2}$$

## Theorem 1

$$\begin{aligned} \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v8\_relat\_2 \\ X4) \wedge ((v1\_partfun1 X4 X0) \wedge (m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ X0 X0)))) \Rightarrow (((k4\_tarski X1 X2 \in X4) \wedge (k4\_tarski X2 X3 \in X4)) \Rightarrow (k4\_tarski \\ X1 X3 \in X4)) \end{aligned}$$