

## t20\_glib\_002

(TMLH9ozfXo6s8F48UFeV5UDYW34WHarjNvt)

October 27, 2020

Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $v1\_glib\_000 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_glib\_000 : \iota \Rightarrow \iota$  be given. Let  $r1\_tarSKI : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_glib\_002 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_glib\_002 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v2\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m3\_glib\_001 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_glib\_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge \\ & ((v1\_funct\_1 X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))) \wedge (m1\_subset\_1 \\ & X1 (k6\_glib\_000 X0))) \Rightarrow ((\neg v1\_xboole\_0 (k2\_glib\_002 X0 X1)) \wedge (m1\_subset\_1 \\ & (k2\_glib\_002 X0 X1) (k1\_zfmisc\_1 (k6\_glib\_000 X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge \\ & ((v1\_funct\_1 X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))) \wedge (m1\_subset\_1 \\ & X1 (k6\_glib\_000 X0))) \Rightarrow ((\neg v1\_xboole\_0 (k1\_glib\_002 X0 X1)) \wedge (m1\_subset\_1 \\ & (k1\_glib\_002 X0 X1) (k1\_zfmisc\_1 (k6\_glib\_000 X0)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\ & X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))) \Rightarrow (\forall X1. (m1\_subset\_1 \\ & X1 (k6\_glib\_000 X0)) \Rightarrow (\forall X2. ((\neg v1\_xboole\_0 X2) \wedge (m1\_subset\_1 \\ & X2 (k1\_zfmisc\_1 (k6\_glib\_000 X0)))) \Rightarrow ((X2 = k2\_glib\_002 X0 X1) \Leftrightarrow \\ & (\forall X3. (X3 \in X2) \Leftrightarrow (\exists X4. ((v2\_glib\_001 X4 X0) \wedge (m3\_glib\_001 \\ & X4 X0)) \wedge (r1\_glib\_001 X0 X1 X3 X4)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\
& X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1 \\
& X1 (k6\_glib\_000 X0)) \Rightarrow (\forall X2.((\neg v1\_xboole\_0 X2) \wedge (m1\_subset\_1 \\
& X2 (k1\_zfmisc\_1 (k6\_glib\_000 X0)))) \Rightarrow ((X2 = k1\_glib\_002 X0 X1) \Leftrightarrow \\
& (\forall X3.(X3 \in X2) \Leftrightarrow (\exists X4.(m3\_glib\_001 X4 X0) \wedge (r1\_glib\_001 \\
& X0 X1 X3 X4))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. (r1\_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \tag{5}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.((v1\_relat\_1 X0) \wedge ((v4\_relat\_1 X0 k5\_numbers) \wedge ((v1\_funct\_1 \\
& X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_glib\_000 X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1 \\
& X1 (k6\_glib\_000 X0)) \Rightarrow (r1\_tarski (k2\_glib\_002 X0 X1) (k1\_glib\_002 \\
& X0 X1)))
\end{aligned}$$