

t6\_jgraph\_5 (TM-  
JEa8tPXZB3izZwNJua84x9uGTC9mtNLmB)

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Let  $l1\_pre\_topc : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  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  $v3\_tops\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k1\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v5\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_tops\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\ & (((v1\_funct\_1 X4) \wedge (m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X1)))) \wedge ((v1\_funct\_1 X5) \wedge (m1\_subset\_1 X5 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X2 X3)))))) \Rightarrow (k1\_partfun1 X0 X1 X2 X3 X4 X5 = k3\_relat\_1 X4 X5) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v2\_funct\_1 \\ & X0))) \wedge ((v1\_relat\_1 X1) \wedge ((v1\_funct\_1 X1) \wedge (v2\_funct\_1 X1)))) \Rightarrow \\ & ((v1\_relat\_1 (k3\_relat\_1 X0 X1)) \wedge (v2\_funct\_1 (k3\_relat\_1 X0 X1))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (l1\_pre\_topc X0) \Rightarrow (\forall X1. (l1\_pre\_topc X1) \Rightarrow (\forall X2. \\ & ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (u1\_struct\_0 X0) (u1\_struct\_0 \\ & X1)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 \\ & X0) (u1\_struct\_0 X1)))))) \Rightarrow ((v3\_tops\_2 X2 X0 X1) \Leftrightarrow ((k1\_relset\_1 \\ & (u1\_struct\_0 X0) X2 = k2\_struct\_0 X0) \wedge ((k2\_relset\_1 (u1\_struct\_0 \\ & X1) X2 = k2\_struct\_0 X1) \wedge ((v2\_funct\_1 X2) \wedge ((v5\_pre\_topc X2 X0 X1) \wedge \\ & (v5\_pre\_topc (k2\_tops\_2 (u1\_struct\_0 X0) (u1\_struct\_0 X1) X2) \\ & X1 X0)))))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2) \end{aligned} \quad (4)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(l1\_pre\_topc\ X0) \Rightarrow (\forall X1.(l1\_pre\_topc\ X1) \Rightarrow (\forall X2. \\ & (l1\_pre\_topc\ X2) \Rightarrow (\forall X3.((v1\_funct\_1\ X3) \wedge ((v1\_funct\_2 \\ & X3\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0\ X1)))))) \Rightarrow (\forall X4. \\ & ((v1\_funct\_1\ X4) \wedge ((v1\_funct\_2\ X4\ (u1\_struct\_0\ X1)\ (u1\_struct\_0 \\ & X2)) \wedge (m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (u1\_struct\_0 \\ & X1)\ (u1\_struct\_0\ X2)))))) \Rightarrow (((v3\_tops\_2\ X4\ X1\ X2) \wedge (v2\_funct\_1 \\ & X3)) \Rightarrow (v2\_funct\_1\ (k1\_partfun1\ (u1\_struct\_0\ X0)\ (u1\_struct\_0 \\ & X1)\ (u1\_struct\_0\ X1)\ (u1\_struct\_0\ X2)\ X3\ X4)))))) \end{aligned}$$