

t7\_setwop\_2  
(TMHmkbF24kpaPiB2tvFQPbxa96bbwfsxT7t)

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Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_finsub\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_binop\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_binop\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v1\_setwiseo : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k7\_setwiseo : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_relat\_1 : \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow (k5\_relat\_1 X1 X0 = k3\_relat\_1 (k4\_relat\_1 X0) X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. (\neg v1\_xboole\_0 X1) \Rightarrow \\ & (\forall X2. (\neg v1\_xboole\_0 X2) \Rightarrow (\forall X3. (m1\_subset\_1 X3 (k5\_finsub\_1 X0)) \Rightarrow (\forall X4. (m1\_subset\_1 X4 (k5\_finsub\_1 X1)) \Rightarrow (\forall X5. \\ & ((v1\_funct\_1 X5) \wedge ((v1\_funct\_2 X5 (k2\_zfmisc\_1 X2 X2) X2) \wedge (m1\_subset\_1 X5 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 X2 X2) X2)))))) \Rightarrow (\forall X6. \\ & ((v1\_funct\_1 X6) \wedge ((v1\_funct\_2 X6 X0 X2) \wedge (m1\_subset\_1 X6 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X2)))))) \Rightarrow (\forall X7. ((v1\_funct\_1 X7) \wedge ((v1\_funct\_2 X7 X1 X2) \wedge (m1\_subset\_1 X7 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X1 X2)))))) \Rightarrow \\ & (((v1\_binop\_1 X5 X2) \wedge (v2\_binop\_1 X5 X2)) \Rightarrow (((X4 = k1\_xboole\_0) \wedge (\neg v1\_setwiseo X5 X2)) \vee ((\forall X8. ((v1\_relat\_1 X8) \wedge (v1\_funct\_1 X8)) \Rightarrow (\neg (k9\_xtuple\_0 X8 = X4) \wedge ((k10\_xtuple\_0 X8 = X3) \wedge ((v2\_funct\_1 X8) \wedge (k2\_partfun1 X1 X2 X7 X4 = k3\_relat\_1 X8 X6)))))) \vee (k7\_setwiseo X1 X2 X5 X4 X7 = k7\_setwiseo X0 X2 X5 X3 X6)))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1\_funct\_1 X2)\wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))\Rightarrow(k2\_partfun1 X0 X1 X2 X3 = k5\_relat\_1 X2 X3) \quad (3)$$

Assume the following.

$$\forall X0.k10\_xtuple\_0 (k4\_relat\_1 X0) = X0 \quad (4)$$

Assume the following.

$$\forall X0.k9\_xtuple\_0 (k4\_relat\_1 X0) = X0 \quad (5)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 (k4\_relat\_1 X0))\wedge(v2\_funct\_1 (k4\_relat\_1 X0)) \quad (6)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 (k4\_relat\_1 X0))\wedge(v1\_funct\_1 (k4\_relat\_1 X0)) \quad (7)$$

Assume the following.

$$\forall X0.v1\_relat\_1 (k4\_relat\_1 X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (9)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0)\Rightarrow(\forall X1.(\neg v1\_xboole\_0 X1)\Rightarrow \\ & \quad (\forall X2.(m1\_subset\_1 X2 (k5\_finsub\_1 X0))\Rightarrow(\forall X3.(( \\ & v1\_funct\_1 X3)\wedge((v1\_funct\_2 X3 (k2\_zfmisc\_1 X1 X1) X1)\wedge(m1\_subset\_1 \\ & \quad X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 X1 X1) X1))))))\Rightarrow(\forall X4. \\ & ((v1\_funct\_1 X4)\wedge((v1\_funct\_2 X4 X0 X1)\wedge(m1\_subset\_1 X4 (k1\_zfmisc\_1 \\ & \quad (k2\_zfmisc\_1 X0 X1))))))\Rightarrow(\forall X5.((v1\_funct\_1 X5)\wedge((v1\_funct\_2 \\ & \quad X5 X0 X1)\wedge(m1\_subset\_1 X5 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))))\Rightarrow \\ & \quad (((v1\_binop\_1 X3 X1)\wedge((v2\_binop\_1 X3 X1)\wedge(k2\_partfun1 X0 X1 X4 \\ & \quad X2 = k2\_partfun1 X0 X1 X5 X2)))\Rightarrow(((X2 = k1\_xboole\_0)\wedge(\neg v1\_setwiseo \\ & \quad X3 X1))\vee(k7\_setwiseo X0 X1 X3 X2 X4 = k7\_setwiseo X0 X1 X3 X2 X5)))))) \end{aligned}$$