

t21\_partfun2  
(TMW9yCmxhiCamHFSR63wgEKBzxFkSsmv1tg)

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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  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_partfun2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (\neg v1\_xboole\_0 X1) \Rightarrow (\forall X2. (\neg v1\_xboole\_0 \\ & X2) \Rightarrow (\forall X3. ((v1\_funct\_1 X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X2 X1)))) \Rightarrow (\forall X4. ((v1\_funct\_1 X4) \wedge (m1\_subset\_1 \\ & X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X2 X1)))) \Rightarrow ((r2\_relset\_1 X2 X1 X3 ( \\ & k3\_partfun2 X2 X1 X0 X4)) \Leftrightarrow ((\forall X5. (m1\_subset\_1 X5 X2) \Rightarrow ((X5 \in \\ & k1\_relset\_1 X2 X3) \Leftrightarrow ((X5 \in k1\_relset\_1 X2 X4) \wedge (k7\_partfun1 X1 X4 \\ & X5 \in X0)))) \wedge (\forall X5. (m1\_subset\_1 X5 X2) \Rightarrow ((X5 \in k1\_relset\_1 \\ & X2 X3) \Rightarrow (k7\_partfun1 X1 X3 X5 = k7\_partfun1 X1 X4 X5))))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((m1\_subset\_1 X2 \\ & (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1)))) \Rightarrow ((r2\_relset\_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1\_xboole\_0 X0) \wedge \\ & ((\neg v1\_xboole\_0 X1) \wedge ((v1\_funct\_1 X3) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1)))))) \Rightarrow ((v1\_funct\_1 (k3\_partfun2 X0 X1 X2 X3)) \wedge \\ & (m1\_subset\_1 (k3\_partfun2 X0 X1 X2 X3) (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X0 X1)))) \end{aligned} \quad (3)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. \forall X1. (\neg v1\_xboole\_0 X1) \Rightarrow (\forall X2. (\neg v1\_xboole\_0 \\ & X2) \Rightarrow (\forall X3. (m1\_subset\_1 X3 X1) \Rightarrow (\forall X4. ((v1\_funct\_1 \\ & X4) \wedge (m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X1 X2)))) \Rightarrow ((X3 \in \\ & k1\_relset\_1 X1 (k3\_partfun2 X1 X2 X0 X4)) \Rightarrow (k7\_partfun1 X2 (k3\_partfun2 \\ & X1 X2 X0 X4) X3 = k7\_partfun1 X2 X4 X3)))))) \end{aligned}$$