

## t9\_partfun2

(TMcT5uCYjDAhzL9JhtoKe3gmjRM2mu8USUj)

October 27, 2020

Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  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  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1\_funct\_1 X2) \wedge (m1\_subset\_1 \\ & \quad X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))) \Rightarrow ((\forall X3. (m1\_subset\_1 \\ & \quad X3 X0) \Rightarrow (\forall X4. (m1\_subset\_1 X4 X0) \Rightarrow (((X3 \in k1\_relset\_1 X0 X2) \wedge \\ & \quad ((X4 \in k1\_relset\_1 X0 X2) \wedge (k1\_funct\_1 X2 X3 = k1\_funct\_1 X2 X4)) \Rightarrow \\ & \quad (X3 = X4)))) \Rightarrow (v2\_funct\_1 X2)) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v4\_relat\_1 X1 X0)) \Rightarrow (k1\_relset\_1 X0 X1 = k9\_xtuple\_0 X1) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge ((v5\_relat\_1 X1 X0) \wedge (v1\_funct\_1 X1))) \Rightarrow (\forall X2. (X2 \in k9\_xtuple\_0 X1) \Rightarrow (k7\_partfun1 X0 X1 X2 = k1\_funct\_1 X1 X2)) \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow ((v4\_relat\_1 X2 X0) \wedge (v5\_relat\_1 X2 X1)) \tag{4}$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2) \tag{5}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1.(\neg v1\_xboole\_0 X1) \Rightarrow \\ & (\forall X2.((v1\_funct\_1 X2) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & X1 X0)))) \Rightarrow ((\forall X3.(m1\_subset\_1 X3 X1) \Rightarrow (\forall X4.(m1\_subset\_1 \\ & X4 X1) \Rightarrow (((X3 \in k1\_relset\_1 X1 X2) \wedge ((X4 \in k1\_relset\_1 X1 X2) \wedge (k7\_partfun1 \\ & X0 X2 X3 = k7\_partfun1 X0 X2 X4))) \Rightarrow (X3 = X4)))) \Rightarrow (v2\_funct\_1 X2)))) \end{aligned}$$