

# t42\_partfun1

(TMXS33NNTKmas6gtTNt9r9DXf3b6rqpTW4zN)

October 27, 2020

Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow ((r1\_tarski (k10\_xtuple\_0 X1) X0) \Rightarrow (k6\_relat\_1 X0 X1 = X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X1) \Rightarrow ((r1\_tarski X0 (k9\_xtuple\_0 X1)) \Rightarrow (k9\_xtuple\_0 (k5\_relat\_1 X1 X0) = X0)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v4\_relat\_1 X1 X0)) \Rightarrow (k1\_relset\_1 X0 X1 = k9\_xtuple\_0 X1) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow ((v1\_funct\_1 (k3\_partfun1 X0 X1 X2)) \wedge (m1\_subset\_1 (k3\_partfun1 X0 X1 X2) (k1\_zfmisc\_1 (k2\_zfmisc\_1 X1 X2)))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v4\_relat\_1 X1 X0)) \Rightarrow ((v1\_partfun1 X1 X0) \Leftrightarrow (k1\_relset\_1 X0 X1 = X0)) \quad (5)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. \forall X2. k3\_partfun1 X0 X1 X2 = k5\_relat\_1 (k6\_relat\_1 X2 X0) X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow((v4\_relat\_1 X2 X0)\wedge(v5\_relat\_1 X2 X1)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1)))\Rightarrow(v1\_relat\_1 X2) \quad (8)$$

**Theorem 1**

$$\forall X0.\forall X1.\forall X2.((v1\_relat\_1 X2)\wedge(v1\_funct\_1 X2))\Rightarrow(((r1\_tarski X0 (k9\_xtuple\_0 X2))\wedge(r1\_tarski (k10\_xtuple\_0 X2) X1))\Rightarrow(v1\_partfun1 (k3\_partfun1 X2 X0 X1) X0))$$