

# l83\_partfun1

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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  $k4\_relat\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  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  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v4\_relat\_1 X1 X0)) \Rightarrow (k1\_relset\_1 X0 X1 = k9\_xtuple\_0 X1) \quad (1)$$

Assume the following.

$$\forall X0. k9\_xtuple\_0 (k4\_relat\_1 X0) = X0 \quad (2)$$

Assume the following.

$$\forall X0. (v1\_relat\_1 (k4\_relat\_1 X0)) \wedge ((v4\_relat\_1 (k4\_relat\_1 X0) X0) \wedge (v5\_relat\_1 (k4\_relat\_1 X0) X0)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v4\_relat\_1 X1 X0)) \Rightarrow (v1\_partfun1 X1 X0) \Leftrightarrow (k1\_relset\_1 X0 X1 = X0) \quad (4)$$

**Theorem 1**

$$\forall X0. \forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0))) \Rightarrow ((X1 = k4\_relat\_1 X0) \Rightarrow (v1\_partfun1 X1 X0))$$