

t25_partfun1
(TMdh3mjknPagrCsFBn3DDWJHxacRLjYP5fQ)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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. Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((X0 \in k9_xtuple_0 (k6_relat_1 X1 X2)) \Rightarrow (k1_funct_1 (k6_relat_1 X1 X2) X0 = k1_funct_1 X2 X0)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((X0 \in k9_xtuple_0 (k6_relat_1 X1 X2)) \Leftrightarrow ((X0 \in k9_xtuple_0 X2) \wedge (k1_funct_1 X2 X0 \in X1))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((X0 \in X1) \Rightarrow (k1_funct_1 (k5_relat_1 X2 X1) X0 = k1_funct_1 X2 X0)) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((v1_relat_1 (k6_relat_1 X0 X1)) \wedge (v1_funct_1 (k6_relat_1 X0 X1))) \quad (4)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow (\forall X1. \forall X2. k3_partfun1 X0 X1 X2 = k5_relat_1 (k6_relat_1 X2 X0) X1) \quad (5)$$

Theorem 1

$$\forall X0. \forall X1. \forall X2. \forall X3. ((v1_relat_1 X3) \wedge (v1_funct_1 X3)) \Rightarrow (((X0 \in k9_xtuple_0 X3) \wedge ((X0 \in X1) \wedge (k1_funct_1 X3 X0 \in X2))) \Rightarrow (k1_funct_1 (k3_partfun1 X3 X1 X2) X0 = k1_funct_1 X3 X0))$$