l79_funct_7 (TMMZ6mjt1MbaHHeUTQAvSEWLPZe383PHcMW)

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Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9\_setfam\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_relat\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $r2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $k6\_partfun1 : \iota \Rightarrow \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k1\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$m1\_subset\_1\ k1\_xboole\_0\ k4\_ordinal1 \tag{1}$$

Assume the following.

$$\forall X0.\forall X1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o.\forall X2.\forall X3.\ \forall X4.((k3\_funct\_2\ k5\_numbers\ X4\ X3\ k6\_numbers = X2) \wedge ((\forall X5.\ (v7\_ordinal1\ X5) \Rightarrow (X1\ X5\ (k1\_funct\_1\ X3\ X5)\ (k3\_funct\_2\ k5\_numbers\ X4\ X3\ (k1\_nat\_1\ X5\ np\_\_1)))) \wedge ((k3\_funct\_2\ k5\_numbers\ X4\ X0\ k6\_numbers = X2) \wedge ((\forall X5.(v7\_ordinal1\ X5) \Rightarrow (X1\ X5\ (k1\_funct\_1\ X0\ X5)\ (k3\_funct\_2\ k5\_numbers\ X4\ X0\ (k1\_nat\_1\ X5\ np\_\_1)))) \wedge (\forall X5.(v7\_ordinal1\ X5) \Rightarrow (\forall X6.(m1\_subset\_1\ X6\ X4) \Rightarrow (\forall X7.(m1\_subset\_1\ X7\ X4) \Rightarrow (\forall X8.(m1\_subset\_1\ X8\ X4) \Rightarrow (((X1\ X5\ X6\ X7) \wedge (X1\ X5\ X6\ X8)) \Rightarrow (X7 = X8)))))))))) \Rightarrow (r2\_funct\_2\ k5\_numbers\ X4\ X3\ X0) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1))) \wedge (m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))) \Rightarrow ((r2\_relset\_1\ X0\ X1\ X2\ X3) \Leftrightarrow (X2 = X3)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0)\wedge((\neg v1\_xboole\_0\ X1)\wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))))\Rightarrow(\forall X2.(m2\_subset\_1\ X2\ X0\ X1)\Leftrightarrow(m1\_subset\_1\ X2\ X1)) \tag{4}$$

Assume the following.

$$\forall X0.k9\_setfam\_1\ X0 = k1\_zfmisc\_1\ X0 \tag{5}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{6}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{7}$$

Assume the following.

$$(\neg v1\_xboole\_0\ k4\_ordinal1)\wedge(v3\_ordinal1\ k4\_ordinal1) \tag{8}$$

Assume the following.

$$\forall X0.\neg v1\_xboole\_0\ (k1\_zfmisc\_1\ X0) \tag{9}$$

Assume the following.

$$\forall X0.m1\_subset\_1\ (k9\_setfam\_1\ X0)\ (k1\_zfmisc\_1\ (k1\_zfmisc\_1\ X0)) \tag{10}$$

Assume the following.

$$\forall X0.(v1\_partfun1\ (k6\_partfun1\ X0)\ X0)\wedge(m1\_subset\_1\ (k6\_partfun1\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))) \tag{11}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.((\neg v1\_xboole\_0\ X0)\wedge (((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ X0\ X1)\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X1)))))\wedge(m1\_subset\_1\ X3\ X0)))\Rightarrow(m1\_subset\_1\ (k3\_funct\_2\ X0\ X1\ X2\ X3)\ X1) \tag{12}$$

Theorem 1

$$\forall X0.(v1\_relat\_1\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ k5\_numbers)\Rightarrow(\forall X2.((v1\_funct\_1\ X2)\wedge((v1\_funct\_2\ X2\ k5\_numbers\ (k9\_setfam\_1\ (k2\_zfmisc\_1\ (k1\_relat\_1\ X0)\ (k1\_relat\_1\ X0))))\wedge(m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k9\_setfam\_1\ (k2\_zfmisc\_1\ (k1\_relat\_1\ X0)\ (k1\_relat\_1\ X0))))))))\Rightarrow(\forall X3.((v1\_funct\_1\ X3)\wedge((v1\_funct\_2\ X3\ k5\_numbers\ (k9\_setfam\_1\ (k2\_zfmisc\_1\ (k1\_relat\_1\ X0)\ (k1\_relat\_1\ X0))))\wedge(m1\_subset\_1\ X3\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers\ (k9\_setfam\_1\ (k2\_zfmisc\_1\ (k1\_relat\_1\ X0)\ (k1\_relat\_1\ X0))))))))\Rightarrow(((r2\_relset\_1\ (k1\_relat\_1\ X0)\ (k1\_relat\_1\ X0)\ (k3\_funct\_2\ k5\_numbers\ (k9\_setfam\_1\ (k2\_zfmisc\_1\ (k1\_relat\_1\ X0)\ (k1\_relat\_1\ X0)))\ X2\ k6\_numbers)\ (k6\_partfun1\ (k1\_relat\_1\ X0)))\wedge((\forall X4.(v7\_ordinal1\ X4)\Rightarrow(k3\_funct\_2\ k5\_numbers\ (k9\_setfam\_1\ (k2\_zfmisc\_1\ (k1\_relat\_1\ X0)\ (k1\_relat\_1\ X0)))\ X2\ (k1\_nat\_1\ X4\ np\_\_1) = k3\_relat\_1\ X0\ (k1\_funct\_1\ X2\ X4)))\wedge((r2\_relset\_1\ (k1\_relat\_1\ X0)\ (k1\_relat\_1\ X0)\ (k3\_funct\_2\ k5\_numbers\ (k9\_setfam\_1\ (k2\_zfmisc\_1\ (k1\_relat\_1\ X0)\ (k1\_relat\_1\ X0)))\ X3\ k6\_numbers)\ (k6\_partfun1\ (k1\_relat\_1\ X0)))\wedge(\forall X4.(v7\_ordinal1\ X4)\Rightarrow(k3\_funct\_2\ k5\_numbers\ (k9\_setfam\_1\ (k2\_zfmisc\_1\ (k1\_relat\_1\ X0)\ (k1\_relat\_1\ X0)))\ X3\ (k1\_nat\_1\ X4\ np\_\_1) = k3\_relat\_1\ X0\ (k1\_funct\_1\ X3\ X4))))))\Rightarrow(r2\_funct\_2\ k5\_numbers\ (k9\_setfam\_1\ (k2\_zfmisc\_1\ (k1\_relat\_1\ X0)\ (k1\_relat\_1\ X0)))\ X2\ X3)))))$$