t48_orders_1 (TM-SCDr9SjkEZ4cABKWcdeoMPvmNf47ABy8M)

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Let $r1\_orders\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_partfun1 : \iota \Rightarrow \iota$ be given. Let $r2\_orders\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_relat\_2 : \iota \Rightarrow o$ be given. Let $v4\_relat\_2 : \iota \Rightarrow o$ be given. Let $v8\_relat\_2 : \iota \Rightarrow o$ be given. Let $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k4\_relat\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_orders\_1 : \iota \Rightarrow o$ be given. Let $v2\_orders\_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_2\ X1) \wedge ((v4\_relat\_2\ X1) \wedge ((v8\_relat\_2\ X1) \wedge ((v1\_partfun1\ X1\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)))))))) \Rightarrow (r2\_orders\_1\ X1\ X0) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_2\ X1) \wedge ((v4\_relat\_2\ X1) \wedge ((v8\_relat\_2\ X1) \wedge ((v1\_partfun1\ X1\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)))))))) \Rightarrow (r1\_orders\_1\ X1\ X0) \tag{2}$$

Assume the following.

$$\forall X0.k6\_partfun1\ X0 = k4\_relat\_1\ X0 \tag{3}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ (k4\_relat\_1\ X0)) \wedge ((v1\_orders\_1\ (k4\_relat\_1\ X0)) \wedge (v2\_orders\_1\ (k4\_relat\_1\ X0))) \tag{4}$$

Assume the following.

$$\forall X0.(v1\_partfun1\ (k6\_partfun1\ X0)\ X0) \wedge (m1\_subset\_1\ (k6\_partfun1\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0))) \tag{5}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0) \Rightarrow ((v2\_orders\_1\ X0) \Leftrightarrow ((v1\_relat\_2\ X0) \wedge ((v8\_relat\_2\ X0) \wedge (v4\_relat\_2\ X0)))) \tag{6}$$

Theorem 1

$$\forall X0.(r1\_orders\_1\ (k6\_partfun1\ X0)\ X0) \wedge (r2\_orders\_1\ (k6\_partfun1\ X0)\ X0)$$