# t24_funcsdom (TMZ4ZMR8oFuFKHtqu4FowTcndZvRnE1gA3m)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k5\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k11\_funcsdom : \iota \Rightarrow \iota$ be given. Let $k9\_funcsdom : \iota \Rightarrow \iota$ be given. Let $m1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ 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 $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_zfmisc\_1 : \iota \Rightarrow \iota$ be given. Let $g6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_numbers : \iota$ be given. Let $l6\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l2\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l5\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l4\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l4\_struct\_0 : \iota \Rightarrow o$ be given. Let $l2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l3\_struct\_0 : \iota \Rightarrow o$ be given. Let $k9\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_funcsdom : \iota \Rightarrow \iota$ be given. Let $k6\_funcsdom : \iota \Rightarrow \iota$ be given. Let $k5\_funcsdom : \iota \Rightarrow \iota$ be given. Let $v36\_algstr\_0 : \iota \Rightarrow o$ be given. Let $u3\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k8\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $u1\_algstr\_0 : \iota \Rightarrow \iota$ be given. Let $u2\_algstr\_0 : \iota \Rightarrow \iota$ be given. Let $u2\_struct\_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0\ X1) \wedge (m1\_funct\_2\ X2\ X0\ X1)) \Rightarrow (\forall X3.(m2\_funct\_2\ X3\ X0\ X1\ X2) \Leftrightarrow (m1\_subset\_1\ X3\ X2)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(((v1\_funct\_1\ X1) \wedge ((v1\_funct\_2\ X1\ (k2\_zfmisc\_1\ X0\ X0)\ X0) \wedge (m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ X0))))) \wedge (((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ (k2\_zfmisc\_1\ X0\ X0)\ X0) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ X0\ X0)\ X0))))) \wedge ((m1\_subset\_1\ X3\ X0) \wedge (m1\_subset\_1\ X4\ X0)))) \Rightarrow (\forall X5.\forall X6.\forall X7.\forall X8.\forall X9.(g6\_algstr\_0\ X0\ X1\ X2\ X3\ X4 = g6\_algstr\_0\ X5\ X6\ X7\ X8\ X9) \Rightarrow ((X0 = X5) \wedge ((X1 = X6) \wedge ((X2 = X7) \wedge ((X3 = X8) \wedge (X4 = X9))))))) \tag{2}$$

Assume the following.

$$\neg v1\_xboole\_0\ k1\_numbers \tag{3}$$

Assume the following.

$$\forall X0.(l6\_algstr\_0\ X0) \Rightarrow ((l2\_algstr\_0\ X0) \wedge (l5\_algstr\_0\ X0)) \tag{4}$$

Assume the following.

$$\forall X0.(l5\_algstr\_0\ X0) \Rightarrow ((l4\_algstr\_0\ X0) \wedge (l4\_struct\_0\ X0)) \tag{5}$$

Assume the following.

$$\forall X0.(l4\_struct\_0\ X0) \Rightarrow ((l2\_struct\_0\ X0) \wedge (l3\_struct\_0\ X0)) \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.(\neg v1\_xboole\_0\ X1) \Rightarrow (m1\_funct\_2\ (k9\_funct\_2\ X0\ X1)\ X0\ X1) \tag{7}$$

Assume the following.

$$\forall X0.m2\_funct\_2\ (k9\_funcsdom\ X0)\ X0\ k1\_numbers\ (k9\_funct\_2\ X0\ k1\_numbers) \tag{8}$$

Assume the following.

$$\forall X0.m2\_funct\_2\ (k8\_funcsdom\ X0)\ X0\ k1\_numbers\ (k9\_funct\_2\ X0\ k1\_numbers) \tag{9}$$

Assume the following.

$$\forall X0.(v1\_funct\_1\ (k6\_funcsdom\ X0)) \wedge ((v1\_funct\_2\ (k6\_funcsdom\ X0)\ (k2\_zfmisc\_1\ (k9\_funct\_2\ X0\ k1\_numbers)\ (k9\_funct\_2\ X0\ k1\_numbers))\ (k9\_funct\_2\ X0\ k1\_numbers)) \wedge (m1\_subset\_1\ (k6\_funcsdom\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ (k9\_funct\_2\ X0\ k1\_numbers)\ (k9\_funct\_2\ X0\ k1\_numbers))\ (k9\_funct\_2\ X0\ k1\_numbers))))) \tag{10}$$

Assume the following.

$$\forall X0.(v1\_funct\_1\ (k5\_funcsdom\ X0)) \wedge ((v1\_funct\_2\ (k5\_funcsdom\ X0)\ (k2\_zfmisc\_1\ (k9\_funct\_2\ X0\ k1\_numbers)\ (k9\_funct\_2\ X0\ k1\_numbers))\ (k9\_funct\_2\ X0\ k1\_numbers)) \wedge (m1\_subset\_1\ (k5\_funcsdom\ X0)\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ (k2\_zfmisc\_1\ (k9\_funct\_2\ X0\ k1\_numbers)\ (k9\_funct\_2\ X0\ k1\_numbers))\ (k9\_funct\_2\ X0\ k1\_numbers))))) \tag{11}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow ((v36\_algstr\_0\ (k11\_funcsdom\ X0)) \wedge (l6\_algstr\_0\ (k11\_funcsdom\ X0))) \tag{12}$$

Assume the following.

$$\forall X0.(l3\_struct\_0\ X0) \Rightarrow (k5\_struct\_0\ X0 = u3\_struct\_0\ X0) \tag{13}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (k11\_funcsdom\ X0 = g6\_algstr\_0\ (k9\_funct\_2\ X0\ k1\_numbers)\ (k5\_funcsdom\ X0)\ (k6\_funcsdom\ X0)\ (k9\_funcsdom\ X0)\ (k8\_funcsdom\ X0)) \tag{14}$$

Assume the following.

$$\forall X0.k9\_funcsdom\ X0 = k8\_funcop\_1\ k5\_numbers\ X0\ np\_\_1 \tag{15}$$

Assume the following.

$$\forall X0.k8\_funcsdom\ X0 = k8\_funcop\_1\ k5\_numbers\ X0\ k6\_numbers \tag{16}$$

Assume the following.

$$\forall X0.(l6\_algstr\_0\ X0) \Rightarrow ((v36\_algstr\_0\ X0) \Rightarrow (X0 = g6\_algstr\_0\ (u1\_struct\_0\ X0)\ (u1\_algstr\_0\ X0)\ (u2\_algstr\_0\ X0)\ (u3\_struct\_0\ X0)\ (u2\_struct\_0\ X0))) \tag{17}$$

**Theorem 1**

$$\forall X0.(\neg v1\_xboole\_0\ X0) \Rightarrow (k5\_struct\_0\ (k11\_funcsdom\ X0) = k9\_funcsdom\ X0)$$