

t41\_setwiseo  
(TMZR X2Uo8AzKvS1Yk9qAvay5J2uZwWG32HE)

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Let  $v1\_setwiseo : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_setwiseo : \iota \Rightarrow \iota$  be given. Let  $k5\_finsub\_1 : \iota \Rightarrow \iota$  be given. Let  $r3\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_setwiseo : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v4\_finsub\_1 : \iota \Rightarrow o$  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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Assume the following.

$$\forall X0. r3\_binop\_1 (k5\_finsub\_1 X0) (k1\_setwiseo X0) (k9\_setwiseo X0) \quad (1)$$

Assume the following.

$$\forall X0. (\neg v1\_xboole\_0 (k5\_finsub\_1 X0)) \wedge (v4\_finsub\_1 (k5\_finsub\_1 X0)) \quad (2)$$

Assume the following.

$$\forall X0. (v1\_funct\_1 (k9\_setwiseo X0)) \wedge ((v1\_funct\_2 (k9\_setwiseo X0) (k2\_zfmisc\_1 (k5\_finsub\_1 X0) (k5\_finsub\_1 X0)) (k5\_finsub\_1 X0)) \wedge (m1\_subset\_1 (k9\_setwiseo X0) (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 (k5\_finsub\_1 X0) (k5\_finsub\_1 X0)) (k5\_finsub\_1 X0)))))) \quad (3)$$

Assume the following.

$$\forall X0. (v1\_xboole\_0 (k1\_setwiseo X0)) \wedge (m1\_subset\_1 (k1\_setwiseo X0) (k5\_finsub\_1 X0)) \quad (4)$$

Assume the following.

$$\forall X0. (\neg v1\_xboole\_0 X0) \Rightarrow (\forall X1. ((v1\_funct\_1 X1) \wedge (v1\_funct\_2 X1 (k2\_zfmisc\_1 X0 X0) X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (k2\_zfmisc\_1 X0 X0) X0)))))) \Rightarrow ((v1\_setwiseo X1 X0) \Leftrightarrow (\exists X2. (m1\_subset\_1 X2 X0) \wedge (r3\_binop\_1 X0 X2 X1))) \quad (5)$$

Assume the following.

$$\forall X0. k1\_setwiseo X0 = k1\_xboole\_0 \quad (6)$$

**Theorem 1**  $\forall X0.v1\_setwise (k9\_setwise X0) (k5\_finsub\_1 X0).$