

## t7\_pscomp\_1

(TMbz1ucTYtxyvgHHqwceVd9hJjFPGS1o2Rw)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  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  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $v1\_comseq\_2 : \iota \Rightarrow o$  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  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_pscomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_pscomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v5\_xxreal\_2 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k5\_seq\_4 : \iota \Rightarrow \iota$  be given. Let  $k4\_seq\_4 : \iota \Rightarrow \iota$  be given. Let  $k7\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v3\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Let  $v1\_seq\_2 : \iota \Rightarrow o$  be given. Let  $v4\_xxreal\_2 : \iota \Rightarrow o$  be given. Let  $v2\_seq\_2 : \iota \Rightarrow o$  be given. Let  $v3\_xxreal\_2 : \iota \Rightarrow o$  be given. Let  $v2\_membered : \iota \Rightarrow o$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 k1\_numbers)) \Rightarrow ((v5\_xxreal\_2 X0) \Rightarrow ((v1\_xboole\_0 X0) \vee (r1\_xxreal\_0 (k5\_seq\_4 X0) (k4\_seq\_4 X0)))) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (k7\_relset\_1 X0 X1 X2 X3 = k7\_relat\_1 X2 X3) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))))))) \Rightarrow (\neg v1\_xboole\_0 (k7\_relat\_1 X2 X0)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0) \wedge (v3\_valued\_0 X0)) \Rightarrow (v3\_membered (k7\_relat\_1 X0 X1)) \quad (4)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\neg v1\_xboole\_0 (u1\_struct\_0 X0)) \quad (5)$$

Assume the following.

$$\neg v1\_xboole\_0 k1\_numbers \quad (6)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (m1\_subset\_1 (k7\_relset\_1 X0 X1 X2 X3) (k1\_zfmisc\_1 X1)) \quad (7)$$

Assume the following.

$$\forall X0. (l1\_struct\_0 X0) \Rightarrow (\forall X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 (u1\_struct\_0 X0) k1\_numbers) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) k1\_numbers)))))) \Rightarrow (k2\_pscomp\_1 X0 X1 = k4\_seq\_4 (k7\_relset\_1 (u1\_struct\_0 X0) k1\_numbers X1 (u1\_struct\_0 X0)))) \quad (8)$$

Assume the following.

$$\forall X0. (l1\_struct\_0 X0) \Rightarrow (\forall X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 (u1\_struct\_0 X0) k1\_numbers) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) k1\_numbers)))))) \Rightarrow (k1\_pscomp\_1 X0 X1 = k5\_seq\_4 (k7\_relset\_1 (u1\_struct\_0 X0) k1\_numbers X1 (u1\_struct\_0 X0)))) \quad (9)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 X0 k1\_numbers) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k1\_numbers)))))) \Rightarrow ((v1\_seq\_2 X1) \Leftrightarrow (v4\_xxreal\_2 (k7\_relset\_1 X0 k1\_numbers X1 X0))) \quad (10)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 X0 k1\_numbers) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 k1\_numbers)))))) \Rightarrow ((v2\_seq\_2 X1) \Leftrightarrow (v3\_xxreal\_2 (k7\_relset\_1 X0 k1\_numbers X1 X0))) \quad (11)$$

Assume the following.

$$\forall X0. ((v2\_membered X0) \wedge ((v3\_xxreal\_2 X0) \wedge (v4\_xxreal\_2 X0))) \Rightarrow ((v2\_membered X0) \wedge (v5\_xxreal\_2 X0)) \quad (12)$$

Assume the following.

$$\forall X0. (v3\_membered X0) \Rightarrow (v2\_membered X0) \quad (13)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v5\_relat\_1 X0 k1\_numbers)) \Rightarrow ((v1\_relat\_1 X0) \wedge (v3\_valued\_0 X0)) \quad (14)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow ((v4\_relat\_1 X2 X0) \wedge (v5\_relat\_1 X2 X1)) \quad (15)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge ((v3\_valued\_0 X0) \wedge (v1\_comseq\_2 X0)))) \Rightarrow ((v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge ((v3\_valued\_0 X0) \wedge ((v1\_seq\_2 X0) \wedge (v2\_seq\_2 X0)))))) \quad (16)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2) \quad (17)$$

**Theorem 1**

$$\forall X0. ((\neg v2\_struct\_0 X0) \wedge (l1\_struct\_0 X0)) \Rightarrow (\forall X1. ((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 (u1\_struct\_0 X0) k1\_numbers) \wedge ((v1\_comseq\_2 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) k1\_numbers)))))) \Rightarrow (r1\_xxreal\_0 (k1\_pscomp\_1 X0 X1) (k2\_pscomp\_1 X0 X1)))$$