

# t22\_pscomp\_1 (TMNBb- DQL9RMQkhhxwqcnX6VrZLcE6Rsm8Kz)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k15\_euclid : \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $k1\_seq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_pscomp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_pscomp\_1 : \iota$  be given. Let  $k17\_euclid : \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_pre\_topc : \iota \Rightarrow o$  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  $v3\_valued\_0 : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v2\_pre\_topc : \iota \Rightarrow o$  be given. Let  $v13\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v2\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v3\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v4\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v5\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v6\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v7\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v8\_rlvect\_1 : \iota \Rightarrow o$  be given. Let  $v5\_rltopsp1 : \iota \Rightarrow o$  be given. Let  $v1\_pscomp\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Let  $l1\_struct\_0 : \iota \Rightarrow o$  be given. Let  $k1\_pre\_topc : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $l1\_rltopsp1 : \iota \Rightarrow o$  be given. Let  $l1\_rlvect\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. \neg (X0 \in X1) \wedge (v1\_xboole\_0 X1) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 X2)) \Rightarrow ((X0 \in X1) \Rightarrow (k1\_funct\_1 (k5\_relat\_1 X2 X1) X0 = k1\_funct\_1 X2 X0)) \quad (2)$$

Assume the following.

$$((v2\_xxreal\_0 np\_2) \wedge (m2\_subset\_1 np\_2 k1\_numbers k5\_numbers)) \wedge ((m1\_subset\_1 np\_2 k5\_numbers) \wedge (m1\_subset\_1 np\_2 k1\_numbers)) \quad (3)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v2\_struct\_0 X0)\wedge(l1\_pre\_topc \\ & X0))\wedge(((v1\_funct\_1 X1)\wedge((v1\_funct\_2 X1 (u1\_struct\_0 X0) k1\_numbers)\wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 X0) k1\_numbers))))))\wedge \\ & (m1\_subset\_1 X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0))))\Rightarrow(k3\_pscomp\_1 \\ & X0 X1 X2 = k5\_relat\_1 X1 X2) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0)\wedge((v1\_funct\_1 X0)\wedge(v3\_valued\_0 X0)))\Rightarrow(k1\_seq\_1 X0 X1 = k1\_funct\_1 X0 X1) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.v1\_relat\_1 (k2\_zfmisc\_1 X0 X1) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v7\_ordinal1 X0)\Rightarrow(((v2\_pre\_topc (k15\_euclid X0))\wedge \\ & ((v13\_algstr\_0 (k15\_euclid X0))\wedge((v2\_rlvect\_1 (k15\_euclid X0))\wedge \\ & ((v3\_rlvect\_1 (k15\_euclid X0))\wedge((v4\_rlvect\_1 (k15\_euclid X0))\wedge \\ & ((v5\_rlvect\_1 (k15\_euclid X0))\wedge((v6\_rlvect\_1 (k15\_euclid X0))\wedge \\ & ((v7\_rlvect\_1 (k15\_euclid X0))\wedge((v8\_rlvect\_1 (k15\_euclid X0))\wedge \\ & (v5\_rltopsp1 (k15\_euclid X0)))))))))) \end{aligned} \quad (8)$$

Assume the following.

$$(v1\_funct\_1 k4\_pscomp\_1)\wedge((v1\_funct\_2 k4\_pscomp\_1 (u1\_struct\_0 (k15\_euclid np\_2)) k1\_numbers)\wedge(v1\_pscomp\_1 k4\_pscomp\_1 (k15\_euclid np\_2))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X0)\wedge(v3\_valued\_0 X0))\Rightarrow((v1\_relat\_1 (k5\_relat\_1 X0 X1))\wedge(v3\_valued\_0 (k5\_relat\_1 X0 X1))) \quad (10)$$

Assume the following.

$$v3\_membered k1\_numbers \quad (11)$$

Assume the following.

$$\forall X0.((v2\_struct\_0 X0)\wedge(l1\_struct\_0 X0))\Rightarrow(v1\_xboole\_0 (u1\_struct\_0 X0)) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge ((v2\_pre\_topc \\ & X0) \wedge (l1\_pre\_topc X0))) \wedge (((v1\_funct\_1 X1) \wedge ((v1\_funct\_2 X1 (u1\_struct\_0 \\ & X0) k1\_numbers) \wedge ((v1\_pscomp\_1 X1 X0) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (u1\_struct\_0 X0) k1\_numbers)))))) \wedge (m1\_subset\_1 \\ & X2 (k1\_zfmisc\_1 (u1\_struct\_0 X0)))))) \Rightarrow ((v1\_funct\_1 (k5\_relat\_1 \\ & X1 X2)) \wedge ((v1\_funct\_2 (k5\_relat\_1 X1 X2) (u1\_struct\_0 (k1\_pre\_topc \\ & X0 X2)) k1\_numbers) \wedge (v1\_pscomp\_1 (k5\_relat\_1 X1 X2) (k1\_pre\_topc \\ & X0 X2)))) \end{aligned} \quad (13)$$

Assume the following.

$$\forall X0. (l1\_rltopsp1 X0) \Rightarrow ((l1\_rlvect\_1 X0) \wedge (l1\_pre\_topc X0)) \quad (14)$$

Assume the following.

$$\forall X0. (l1\_pre\_topc X0) \Rightarrow (l1\_struct\_0 X0) \quad (15)$$

Assume the following.

$$\forall X0. \forall X1. (v1\_relat\_1 X0) \Rightarrow (v1\_relat\_1 (k5\_relat\_1 X0 X1)) \quad (16)$$

Assume the following.

$$\begin{aligned} & (v1\_funct\_1 k4\_pscomp\_1) \wedge ((v1\_funct\_2 k4\_pscomp\_1 (u1\_struct\_0 \\ & (k15\_euclid np\_2)) k1\_numbers) \wedge (m1\_subset\_1 k4\_pscomp\_1 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)) k1\_numbers)))) \end{aligned} \quad (17)$$

Assume the following.

$$\forall X0. (v7\_ordinal1 X0) \Rightarrow ((v5\_rltopsp1 (k15\_euclid X0)) \wedge (l1\_rltopsp1 (k15\_euclid X0))) \quad (18)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1\_funct\_1 X0) \wedge ((v1\_funct\_2 X0 (u1\_struct\_0 (k15\_euclid \\ & np\_2)) k1\_numbers) \wedge (m1\_subset\_1 X0 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & (u1\_struct\_0 (k15\_euclid np\_2)) k1\_numbers)))))) \Rightarrow ((X0 = k4\_pscomp\_1) \Leftrightarrow \\ & (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2)))) \Rightarrow \\ & (k1\_seq\_1 X0 X1 = k17\_euclid X1)) \end{aligned} \quad (19)$$

Assume the following.

$$\forall X0. (m1\_subset\_1 X0 k4\_ordinal1) \Rightarrow (v7\_ordinal1 X0) \quad (20)$$

Assume the following.

$$\forall X0. (v1\_relat\_1 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (v1\_relat\_1 X1)) \quad (21)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (v1\_xboole\_0 X1)) \quad (22)$$

Assume the following.

$$\forall X0.\forall X1.(v3\_membered X1) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v3\_valued\_0 X2)) \quad (23)$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1 X0 (k1\_zfmisc\_1 (u1\_struct\_0 (k15\_euclid np\_2)))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 (k15\_euclid np\_2)))) \Rightarrow ((X1 \in X0) \Rightarrow (k1\_seq\_1 (k3\_pscomp\_1 (k15\_euclid np\_2) k4\_pscomp\_1 X0) X1 = k17\_euclid X1))$$