

# t17\_combgras

## (TMWN4ZUmKqWfQsiGAcFaVpijf2LVzpdvxJY)

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Let  $l1\_incsp\_1 : \iota \Rightarrow o$  be given. Let  $l1\_combgras : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $g1\_combgras : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u1\_combgras : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u2\_combgras : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v6\_combgras : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  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  $u1\_incsp\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u2\_incsp\_1 : \iota \Rightarrow \iota$  be given. Let  $r1\_incsp\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_combgras : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_combgras : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((l1\_incsp\_1 X0) \wedge \\ & ((l1\_incsp\_1 X1) \wedge ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 (u1\_incsp\_1 \\ & X0) (u1\_incsp\_1 X1)) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & (u1\_incsp\_1 X0) (u1\_incsp\_1 X1)))))) \wedge ((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 \\ & X3 (u2\_incsp\_1 X0) (u2\_incsp\_1 X1)) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 (u2\_incsp\_1 X0) (u2\_incsp\_1 X1)))))))))) \Rightarrow (\forall X4. \\ & \forall X5. \forall X6. \forall X7. (g1\_combgras X0 X1 X2 X3 = g1\_combgras \\ & X4 X5 X6 X7) \Rightarrow ((X0 = X4) \wedge ((X1 = X5) \wedge ((X2 = X6) \wedge (X3 = X7)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((l1\_incsp\_1 X0) \wedge ((l1\_incsp\_1 \\ & X1) \wedge (l1\_combgras X2 X0 X1))) \Rightarrow ((v1\_funct\_1 (u2\_combgras X0 X1 X2)) \wedge \\ & ((v1\_funct\_2 (u2\_combgras X0 X1 X2) (u2\_incsp\_1 X0) (u2\_incsp\_1 \\ & X1)) \wedge (m1\_subset\_1 (u2\_combgras X0 X1 X2) (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & (u2\_incsp\_1 X0) (u2\_incsp\_1 X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((l1\_incsp\_1 X0) \wedge ((l1\_incsp\_1 \\ & X1) \wedge (l1\_combgras X2 X0 X1))) \Rightarrow ((v1\_funct\_1 (u1\_combgras X0 X1 X2)) \wedge \\ & ((v1\_funct\_2 (u1\_combgras X0 X1 X2) (u1\_incsp\_1 X0) (u1\_incsp\_1 \\ & X1)) \wedge (m1\_subset\_1 (u1\_combgras X0 X1 X2) (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\ & (u1\_incsp\_1 X0) (u1\_incsp\_1 X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1\_incsp\_1 X0) \Rightarrow (\forall X1.(l1\_incsp\_1 X1) \Rightarrow (\forall X2. \\
& (l1\_combgras X2 X0 X1) \Rightarrow ((v6\_combgras X2 X0 X1) \Leftrightarrow (\forall X3.(m1\_subset\_1 \\
& X3 (u1\_incsp\_1 X0) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u2\_incsp\_1 X0) \Rightarrow \\
& ((r1\_incsp\_1 X0 X3 X4) \Leftrightarrow (r1\_incsp\_1 X1 (k2\_combgras X0 X1 X2 X3) ( \\
& k3\_combgras X0 X1 X2 X4))))))))))
\end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1\_incsp\_1 X0) \Rightarrow (\forall X1.(l1\_incsp\_1 X1) \Rightarrow (\forall X2. \\
& (l1\_combgras X2 X0 X1) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u2\_incsp\_1 \\
& X0) \Rightarrow (k3\_combgras X0 X1 X2 X3 = k3\_funct\_2 (u2\_incsp\_1 X0) (u2\_incsp\_1 \\
& X1) (u2\_combgras X0 X1 X2) X3))))))
\end{aligned} \tag{5}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(l1\_incsp\_1 X0) \Rightarrow (\forall X1.(l1\_incsp\_1 X1) \Rightarrow (\forall X2. \\
& (l1\_combgras X2 X0 X1) \Rightarrow (\forall X3.(m1\_subset\_1 X3 (u1\_incsp\_1 \\
& X0) \Rightarrow (k2\_combgras X0 X1 X2 X3 = k3\_funct\_2 (u1\_incsp\_1 X0) (u1\_incsp\_1 \\
& X1) (u1\_combgras X0 X1 X2) X3))))))
\end{aligned} \tag{6}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.(l1\_incsp\_1 X0) \Rightarrow (\forall X1.(l1\_incsp\_1 X1) \Rightarrow (\forall X2. \\
& (l1\_combgras X2 X0 X1) \Rightarrow (\forall X3.(l1\_combgras X3 X0 X1) \Rightarrow (((g1\_combgras \\
& X0 X1 (u1\_combgras X0 X1 X2) (u2\_combgras X0 X1 X2) = g1\_combgras X0 \\
& X1 (u1\_combgras X0 X1 X3) (u2\_combgras X0 X1 X3)) \wedge (v6\_combgras X2 \\
& X0 X1)) \Rightarrow (v6\_combgras X3 X0 X1))))))
\end{aligned}$$