

# t58\_compos\_1

(TMV5UHjc4PgDuyE3ieA2yoPjyYPEzmg4Lac)

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Let  $l1\_compos\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_compos\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k11\_compos\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k16\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_afinsq\_1 : \iota \Rightarrow \iota$  be given. Let  $k9\_compos\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_afinsq\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v5\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_ordinal4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_afinsq\_1 : \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k10\_compos\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_afinsq\_1 : \iota \Rightarrow o$  be given. Let  $k4\_compos\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_compos\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0. \forall X1. k1\_funct\_1 (k16\_funcop\_1 X0 X1) X0 = X1 \quad (1)$$

Assume the following.

$$\forall X0. (l1\_compos\_1 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_compos\_1 X0)) \Rightarrow (k6\_numbers \in k2\_afinsq\_1 (k9\_compos\_1 X0 X1))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((l1\_compos\_1 X0) \wedge (m1\_subset\_1 X1 (u1\_compos\_1 X0))) \Rightarrow (k9\_compos\_1 X0 X1 = k3\_afinsq\_1 X1) \quad (3)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (4)$$

Assume the following.

$$\forall X0. (v5\_ordinal1 (k3\_afinsq\_1 X0)) \wedge (v1\_finset\_1 (k3\_afinsq\_1 X0)) \quad (5)$$

Assume the following.

$$\forall X0.(v1\_relat\_1 (k3\_afinsq\_1 X0)) \wedge (v1\_funct\_1 (k3\_afinsq\_1 X0)) \quad (6)$$

Assume the following.

$$v1\_xboole\_0 \quad k1\_xboole\_0 \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((l1\_compos\_1 X0) \wedge (m1\_subset\_1 X1 (u1\_compos\_1 \\ X0))) \Rightarrow ((v1\_relat\_1 (k9\_compos\_1 X0 X1)) \wedge ((v4\_relat\_1 (k9\_compos\_1 \\ X0 X1) k5\_numbers) \wedge ((v5\_relat\_1 (k9\_compos\_1 X0 X1) (u1\_compos\_1 \\ X0)) \wedge ((v1\_funct\_1 (k9\_compos\_1 X0 X1)) \wedge (v1\_finset\_1 (k9\_compos\_1 \\ X0 X1)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.(((v1\_relat\_1 X0) \wedge ((v5\_ordinal1 X0) \wedge ( \\ v1\_funct\_1 X0))) \wedge ((v1\_relat\_1 X1) \wedge ((v5\_ordinal1 X1) \wedge (v1\_funct\_1 \\ X1)))) \Rightarrow ((v1\_relat\_1 (k1\_ordinal4 X0 X1)) \wedge ((v5\_ordinal1 (k1\_ordinal4 \\ X0 X1)) \wedge (v1\_funct\_1 (k1\_ordinal4 X0 X1)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge ((v5\_ordinal1 X0) \wedge ((v1\_funct\_1 \\ X0) \wedge (v1\_finset\_1 X0)))) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge ((v5\_ordinal1 \\ X1) \wedge ((v1\_funct\_1 X1) \wedge (v1\_finset\_1 X1)))) \Rightarrow (\forall X2.((v1\_relat\_1 \\ X2) \wedge ((v5\_ordinal1 X2) \wedge (v1\_funct\_1 X2)))) \Rightarrow ((X2 = k1\_ordinal4 X0 \\ X1) \Leftrightarrow ((k9\_xtuple\_0 X2 = k2\_nat\_1 (k1\_afinsq\_1 X0) (k1\_afinsq\_1 \\ X1)) \wedge ((\forall X3.(v7\_ordinal1 X3) \Rightarrow ((X3 \in k2\_afinsq\_1 X0) \Rightarrow (k1\_funct\_1 \\ X2 X3 = k1\_funct\_1 X0 X3))) \wedge (\forall X3.(v7\_ordinal1 X3) \Rightarrow ((X3 \in \\ k2\_afinsq\_1 X1) \Rightarrow (k1\_funct\_1 X2 (k2\_nat\_1 (k1\_afinsq\_1 X0) X3) = \\ k1\_funct\_1 X1 X3)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(l1\_compos\_1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_compos\_1 X0)) \Rightarrow (k11\_compos\_1 X0 X1 = k10\_compos\_1 X0 (k9\_compos\_1 X0 X1))) \quad (11)$$

Assume the following.

$$\begin{aligned} \forall X0.(l1\_compos\_1 X0) \Rightarrow (\forall X1.((v1\_relat\_1 X1) \wedge (( \\ v4\_relat\_1 X1 k5\_numbers) \wedge ((v5\_relat\_1 X1 (u1\_compos\_1 X0)) \wedge \\ ((v1\_funct\_1 X1) \wedge ((v1\_finset\_1 X1) \wedge (v1\_afinsq\_1 X1)))))) \Rightarrow ( \\ k10\_compos\_1 X0 X1 = k1\_ordinal4 X1 (k4\_compos\_1 X0))) \end{aligned} \quad (12)$$

Assume the following.

$$\forall X0.k3\_afinsq\_1 X0 = k16\_funcop\_1 k6\_numbers X0 \quad (13)$$

Assume the following.

$$\forall X0.(l1\_compos\_1 X0) \Rightarrow (k4\_compos\_1 X0 = k3\_afinsq\_1 (k2\_compos\_1 X0)) \quad (14)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (v7\_ordinal1 X0) \quad (15)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v5\_ordinal1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_finset\_1 X0)))) \Rightarrow ((v1\_relat\_1 X0) \wedge ((v5\_ordinal1 X0) \wedge ((v1\_funct\_1 X0) \wedge ((v1\_finset\_1 X0) \wedge (v1\_afinsq\_1 X0))))) \quad (16)$$

**Theorem 1**

$$\forall X0.(l1\_compos\_1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_compos\_1 X0)) \Rightarrow (k1\_funct\_1 (k11\_compos\_1 X0 X1) k6\_numbers = X1))$$