

t41\_modal\_1  
(TMR9JjDjNHDhmGcCQ8xGL69BrmTM7oixDee)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_modal\_1 : \iota$  be given. Let  $k17\_modal\_1 : \iota$  be given. Let  $v1\_modal\_1 : \iota \Rightarrow o$  be given. Let  $v2\_modal\_1 : \iota \Rightarrow o$  be given. Let  $v3\_modal\_1 : \iota \Rightarrow o$  be given. Let  $v4\_modal\_1 : \iota \Rightarrow o$  be given. Let  $k3\_modal\_1 : \iota$  be given. Let  $k16\_modal\_1 : \iota \Rightarrow \iota$  be given. Let  $k10\_modal\_1 : \iota \Rightarrow \iota$  be given. Let  $k11\_modal\_1 : \iota \Rightarrow \iota$  be given. Let  $k12\_modal\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0 : \iota \Rightarrow o. ((X0 \ k17\_modal\_1) \wedge ((\forall X1. (m1\_subset\_1 \\ & X1 \ k3\_modal\_1) \Rightarrow (X0 \ (k16\_modal\_1 \ X1))) \wedge ((\forall X1. (m1\_subset\_1 \\ & X1 \ k6\_modal\_1) \Rightarrow ((X0 \ X1) \Rightarrow (X0 \ (k10\_modal\_1 \ X1)))) \wedge ((\forall X1. \\ & (m1\_subset\_1 \ X1 \ k6\_modal\_1) \Rightarrow ((X0 \ X1) \Rightarrow (X0 \ (k11\_modal\_1 \ X1)))) \wedge \\ & (\forall X1. (m1\_subset\_1 \ X1 \ k6\_modal\_1) \Rightarrow (\forall X2. (m1\_subset\_1 \\ & X2 \ k6\_modal\_1) \Rightarrow (((X0 \ X1) \wedge (X0 \ X2)) \Rightarrow (X0 \ (k12\_modal\_1 \ X1 \ X2)))))) \Rightarrow \\ & (\forall X1. (m1\_subset\_1 \ X1 \ k6\_modal\_1) \Rightarrow (X0 \ X1)) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. (m1\_subset\_1 \ X0 \ k3\_modal\_1) \Rightarrow (m1\_subset\_1 \ (k16\_modal\_1 \ X0) \ k6\_modal\_1) \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. ((m1\_subset\_1 \ X0 \ k6\_modal\_1) \wedge (m1\_subset\_1 \ X1 \ k6\_modal\_1)) \Rightarrow (m1\_subset\_1 \ (k12\_modal\_1 \ X0 \ X1) \ k6\_modal\_1) \tag{3}$$

Assume the following.

$$\forall X0. (m1\_subset\_1 \ X0 \ k6\_modal\_1) \Rightarrow (m1\_subset\_1 \ (k11\_modal\_1 \ X0) \ k6\_modal\_1) \tag{4}$$

Assume the following.

$$\forall X0. (m1\_subset\_1 \ X0 \ k6\_modal\_1) \Rightarrow (m1\_subset\_1 \ (k10\_modal\_1 \ X0) \ k6\_modal\_1) \tag{5}$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k6\_modal\_1) \Rightarrow ((v4\_modal\_1 X0) \Leftrightarrow (\exists X1. (m1\_subset\_1 X1 k6\_modal\_1) \wedge (\exists X2.(m1\_subset\_1 X2 k6\_modal\_1) \wedge (X0 = k12\_modal\_1 X1 X2)))) \quad (6)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k6\_modal\_1) \Rightarrow ((v3\_modal\_1 X0) \Leftrightarrow (\exists X1. (m1\_subset\_1 X1 k6\_modal\_1) \wedge (X0 = k11\_modal\_1 X1))) \quad (7)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k6\_modal\_1) \Rightarrow ((v2\_modal\_1 X0) \Leftrightarrow (\exists X1. (m1\_subset\_1 X1 k6\_modal\_1) \wedge (X0 = k10\_modal\_1 X1))) \quad (8)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k6\_modal\_1) \Rightarrow ((v1\_modal\_1 X0) \Leftrightarrow (\exists X1. (m1\_subset\_1 X1 k3\_modal\_1) \wedge (X0 = k16\_modal\_1 X1))) \quad (9)$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1 X0 k6\_modal\_1) \Rightarrow (\neg(X0 \neq k17\_modal\_1) \wedge ((\neg(v1\_modal\_1 X0) \wedge (m1\_subset\_1 X0 k6\_modal\_1)) \wedge ((\neg(v2\_modal\_1 X0) \wedge (m1\_subset\_1 X0 k6\_modal\_1)) \wedge ((\neg(v3\_modal\_1 X0) \wedge (m1\_subset\_1 X0 k6\_modal\_1)) \wedge (\neg(v4\_modal\_1 X0) \wedge (m1\_subset\_1 X0 k6\_modal\_1)))))$$