

## t89\_member\_1

(TMHNC9otZPWc2g5soTQTJxZVSCyUFNcQVM9)

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Let  $v1\_membered : \iota \Rightarrow o$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k5\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k13\_member\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_numbers : \iota$  be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (1)$$

Assume the following.

$$\forall X0. (v1\_xcmplx\_0 X0) \Leftrightarrow (X0 \in k2\_numbers) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (v1\_membered X0) \Rightarrow (\forall X1. (v1\_membered X1) \Rightarrow (k13\_member\_1 \\ X0 X1 = ReplSep2 (toset (\lambda X2 : \iota. m1\_subset\_1 X2 k2\_numbers)) \\ (\lambda X2 : \iota. toset (\lambda X3 : \iota. m1\_subset\_1 X3 k2\_numbers)) ( \\ \lambda X2 : \iota. \lambda X3 : \iota. (X2 \in X0) \wedge (X3 \in X1)) (\lambda X2 : \iota. \lambda X3 : \\ \iota. k5\_binop\_2 X2 X3))) \end{aligned} \quad (3)$$

### Theorem 1

$$\begin{aligned} \forall X0. (v1\_membered X0) \Rightarrow (\forall X1. (v1\_membered X1) \Rightarrow (\forall X2. \\ (v1\_xcmplx\_0 X2) \Rightarrow (\forall X3. (v1\_xcmplx\_0 X3) \Rightarrow (((X2 \in X0) \wedge (X3 \in \\ X1)) \Rightarrow (k5\_binop\_2 X2 X3 \in k13\_member\_1 X0 X1)))))) \end{aligned}$$