

# t4\_amistd\_2 (TMWFxZGut- gAXq1gmQBWUkKTnALTVQ3WSz66)

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Let  $v1\_setfam\_1 : \iota \Rightarrow o$  be given. Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v2\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v3\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_compos\_1 : \iota \Rightarrow \iota$  be given. Let  $v2\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k2\_amistd\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  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  $k1\_amistd\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_domain\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1\_setfam\_1 X0) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge \\ & ((v2\_memstr\_0 X1 X0) \wedge ((v3\_memstr\_0 X1 X0) \wedge (l1\_extpro\_1 X1 X0)))) \Rightarrow \\ & (\forall X2.(m2\_subset\_1 X2 k1\_numbers k5\_numbers) \Rightarrow (\forall X3. \\ & (m1\_subset\_1 X3 (u1\_compos\_1 X1)) \Rightarrow ((v2\_extpro\_1 X3 X0 X1) \Rightarrow (k1\_amistd\_1 \\ & X0 X1 X2 X3 = k6\_domain\_1 k5\_numbers X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(\neg v1\_setfam\_1 X0) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge \\ & ((v2\_memstr\_0 X1 X0) \wedge ((v3\_memstr\_0 X1 X0) \wedge (l1\_extpro\_1 X1 X0)))) \Rightarrow \\ & (\forall X2.(m1\_subset\_1 X2 (u1\_compos\_1 X1)) \Rightarrow ((\forall X3.( \\ & m2\_subset\_1 X3 k1\_numbers k5\_numbers) \Rightarrow (k1\_amistd\_1 X0 X1 X3 X2 = \\ & k6\_domain\_1 k5\_numbers X3)) \Rightarrow (v1\_xboole\_0 (k2\_amistd\_1 X0 X1 X2)))))) \end{aligned} \tag{2}$$

## Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1\_setfam\_1 X0) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge \\ & ((v2\_memstr\_0 X1 X0) \wedge ((v3\_memstr\_0 X1 X0) \wedge (l1\_extpro\_1 X1 X0)))) \Rightarrow \\ & (\forall X2.(m1\_subset\_1 X2 (u1\_compos\_1 X1)) \Rightarrow ((v2\_extpro\_1 \\ & X2 X0 X1) \Rightarrow (v1\_xboole\_0 (k2\_amistd\_1 X0 X1 X2)))))) \end{aligned}$$