

## t29\_ami\_3

(TMRVuC12Ngauki7pxRkVwZsPxCEAoFiZcCx)

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Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_card\_3 : \iota \Rightarrow \iota$  be given. Let  $k3\_relat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_ami\_2 : \iota$  be given. Let  $k4\_ami\_2 : \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_ami\_3 : \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v5\_funct\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  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  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v4\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v2\_relat\_1 : \iota \Rightarrow o$  be given. Let  $l1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_compos\_1 : \iota \Rightarrow o$  be given. Let  $v1\_setfam\_1 : \iota \Rightarrow o$  be given. Let  $v1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0\ np\_2) \wedge (m2\_subset\_1\ np\_2\ k1\_numbers\ k5\_numbers)) \wedge \\ & ((m1\_subset\_1\ np\_2\ k5\_numbers) \wedge (m1\_subset\_1\ np\_2\ k1\_numbers)) \end{aligned} \quad (1)$$

Assume the following.

$$\neg v1\_xboole\_0\ np\_2 \quad (2)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (3)$$

Assume the following.

$$k2\_memstr\_0\ np\_2\ k1\_ami\_3 = k3\_relat\_1\ k3\_ami\_2\ k4\_ami\_2 \quad (4)$$

Assume the following.

$$\forall X0. ((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow (v4\_funct\_1\ (k4\_card\_3\ X0)) \quad (5)$$

Assume the following.

$$(v1\_relat\_1\ (k3\_relat\_1\ k3\_ami\_2\ k4\_ami\_2)) \wedge (v2\_relat\_1\ (k3\_relat\_1\ k3\_ami\_2\ k4\_ami\_2)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(l1\_extpro\_1 X1 X0)\Rightarrow((l1\_memstr\_0 X1 X0)\wedge(l1\_compos\_1 X1)) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1\_setfam\_1 X0)\wedge(l1\_memstr\_0 X1 X0))\Rightarrow \\ & ((v1\_relat\_1 (k2\_memstr\_0 X0 X1))\wedge((v4\_relat\_1 (k2\_memstr\_0 \\ & X0 X1) (u1\_struct\_0 X1))\wedge((v1\_funct\_1 (k2\_memstr\_0 X0 X1))\wedge(v1\_partfun1 \\ & (k2\_memstr\_0 X0 X1) (u1\_struct\_0 X1)))))) \end{aligned} \quad (8)$$

Assume the following.

$$(v1\_extpro\_1 k1\_ami\_3 np\_2)\wedge(l1\_extpro\_1 k1\_ami\_3 np\_2) \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1\_relat\_1 X0)\wedge((v2\_relat\_1 X0)\wedge(v1\_funct\_1 X0)))\Rightarrow \\ & (\forall X1.(m1\_subset\_1 X1 (k4\_card\_3 X0))\Rightarrow(v5\_funct\_1 X1 X0)) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k4\_ordinal1)\Rightarrow(v7\_ordinal1 X0) \quad (11)$$

Assume the following.

$$\forall X0.(v4\_funct\_1 X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 X0)\Rightarrow((v1\_relat\_1 X1)\wedge(v1\_funct\_1 X1))) \quad (12)$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0 X0)\wedge(v7\_ordinal1 X0))\Rightarrow((\neg v1\_xboole\_0 X0)\wedge((v7\_ordinal1 X0)\wedge(\neg v1\_setfam\_1 X0))) \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_relat\_1 X1)\wedge((v2\_relat\_1 X1)\wedge((v4\_relat\_1 \\ & X1 X0)\wedge((v1\_funct\_1 X1)\wedge(v1\_partfun1 X1 X0))))))\Rightarrow(\forall X2. \\ & (m1\_subset\_1 X2 (k4\_card\_3 X1))\Rightarrow(v1\_partfun1 X2 X0)) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_relat\_1 X1)\wedge((v2\_relat\_1 X1)\wedge((v4\_relat\_1 \\ & X1 X0)\wedge(v1\_funct\_1 X1))))\Rightarrow(\forall X2.(m1\_subset\_1 X2 (k4\_card\_3 \\ & X1))\Rightarrow(v4\_relat\_1 X2 X0)) \end{aligned} \quad (15)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (k4\_card\_3 (k3\_relat\_1 k3\_ami\_2 k4\_ami\_2)))\Rightarrow \\ & ((v1\_relat\_1 X0)\wedge((v4\_relat\_1 X0 (u1\_struct\_0 k1\_ami\_3))\wedge((v1\_funct\_1 X0)\wedge((v5\_funct\_1 X0 (k2\_memstr\_0 np\_2 k1\_ami\_3))\wedge(v1\_partfun1 X0 (u1\_struct\_0 k1\_ami\_3)))))) \end{aligned}$$