

## l2\_ami\_3

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Let  $k2\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $k1\_ami\_3 : \iota$  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  $v2\_xxreal\_0 : \iota \Rightarrow o$  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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v1\_compos\_0 : \iota \Rightarrow o$  be given. Let  $v2\_compos\_0 : \iota \Rightarrow o$  be given. Let  $v3\_compos\_0 : \iota \Rightarrow o$  be given. Let  $v5\_compos\_0 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_card\_3 : \iota \Rightarrow \iota$  be given. Let  $g1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_scm\_inst : \iota$  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  $k9\_ami\_2 : \iota$  be given. Let  $k1\_ami\_2 : \iota$  be given. Let  $k1\_funct\_7 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_setfam\_1 : \iota \Rightarrow o$  be given. Let  $u1\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $u2\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $u2\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $u1\_compos\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  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.

$$\begin{aligned}
& \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5. \\
& \forall X6.((m1\_subset\_1 X2 X1)\wedge(((v1\_compos\_0 X3)\wedge((v2\_compos\_0 \\
& X3)\wedge((v3\_compos\_0 X3)\wedge(v5\_compos\_0 X3))))\wedge(((v1\_funct\_1 X4)\wedge \\
& ((v1\_funct\_2 X4 X1 X0)\wedge(m1\_subset\_1 X4 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& X1 X0))))\wedge(((v1\_relat\_1 X5)\wedge((v4\_relat\_1 X5 X0)\wedge((v1\_funct\_1 \\
& X5)\wedge(v1\_partfun1 X5 X0))))\wedge((v1\_funct\_1 X6)\wedge((v1\_funct\_2 X6 \\
& X3 (k1\_funct\_2 (k4\_card\_3 (k3\_relat\_1 X4 X5)) (k4\_card\_3 (k3\_relat\_1 \\
& X4 X5))))\wedge(m1\_subset\_1 X6 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X3 (k1\_funct\_2 \\
& (k4\_card\_3 (k3\_relat\_1 X4 X5)) (k4\_card\_3 (k3\_relat\_1 X4 X5))))))))))\Rightarrow \\
& (\forall X7.\forall X8.\forall X9.\forall X10.\forall X11.\forall X12. \\
& \forall X13.(g1\_extpro\_1 X0 X1 X2 X3 X4 X5 X6 = g1\_extpro\_1 X7 X8 X9 \\
& X10 X11 X12 X13)\Rightarrow((X0 = X7)\wedge((X1 = X8)\wedge((X2 = X9)\wedge((X3 = X10)\wedge((X4 = \\
& X11)\wedge((X5 = X12)\wedge(X6 = X13))))))))))
\end{aligned} \tag{4}$$

Assume the following.

$$(\neg v1\_xboole\_0 k3\_scm\_inst)\wedge(v5\_compos\_0 k3\_scm\_inst) \tag{5}$$

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$$(\neg v1\_xboole\_0 k3\_scm\_inst)\wedge(v3\_compos\_0 k3\_scm\_inst) \tag{6}$$

Assume the following.

$$(\neg v1\_xboole\_0 k3\_scm\_inst)\wedge(v2\_compos\_0 k3\_scm\_inst) \tag{7}$$

Assume the following.

$$(\neg v1\_xboole\_0 k3\_scm\_inst)\wedge(v1\_compos\_0 k3\_scm\_inst) \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.(l1\_extpro\_1 X1 X0)\Rightarrow((l1\_memstr\_0 X1 X0)\wedge \\
(l1\_compos\_1 X1)) \tag{9}$$

Assume the following.

$$\begin{aligned}
& (v1\_funct\_1 k9\_ami\_2)\wedge((v1\_funct\_2 k9\_ami\_2 k3\_scm\_inst (k1\_funct\_2 \\
& (k4\_card\_3 (k3\_relat\_1 k3\_ami\_2 k4\_ami\_2)) (k4\_card\_3 (k3\_relat\_1 \\
& k3\_ami\_2 k4\_ami\_2))))\wedge(m1\_subset\_1 k9\_ami\_2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& k3\_scm\_inst (k1\_funct\_2 (k4\_card\_3 (k3\_relat\_1 k3\_ami\_2 k4\_ami\_2)) \\
& (k4\_card\_3 (k3\_relat\_1 k3\_ami\_2 k4\_ami\_2))))))
\end{aligned} \tag{10}$$

Assume the following.

$$(v1\_relat\_1 k4\_ami\_2)\wedge((v4\_relat\_1 k4\_ami\_2 np\_2)\wedge((v1\_funct\_1 \\
k4\_ami\_2)\wedge(v1\_partfun1 k4\_ami\_2 np\_2))) \tag{11}$$

Assume the following.

$$(v1\_funct\_1\ k3\_ami\_2) \wedge ((v1\_funct\_2\ k3\_ami\_2\ k1\_ami\_2\ np\_2) \wedge (m1\_subset\_1\ k3\_ami\_2\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k1\_ami\_2\ np\_2)))) \quad (12)$$

Assume the following.

$$\forall X0. \forall X1. m1\_subset\_1\ (k1\_funct\_7\ X0\ X1)\ X1 \quad (13)$$

Assume the following.

$$(v1\_extpro\_1\ k1\_ami\_3\ np\_2) \wedge (l1\_extpro\_1\ k1\_ami\_3\ np\_2) \quad (14)$$

Assume the following.

$$\forall X0. (\neg v1\_setfam\_1\ X0) \Rightarrow (\forall X1. (l1\_memstr\_0\ X1\ X0) \Rightarrow (k2\_memstr\_0\ X0\ X1 = k3\_relat\_1\ (u1\_memstr\_0\ X0\ X1)\ (u2\_memstr\_0\ X0\ X1))) \quad (15)$$

Assume the following.

$$k1\_ami\_3 = g1\_extpro\_1\ np\_2\ k1\_ami\_2\ (k1\_funct\_7\ k5\_numbers\ k1\_ami\_2) \quad (16)$$

$$k3\_scm\_inst\ k3\_ami\_2\ k4\_ami\_2\ k9\_ami\_2$$

Assume the following.

$$\forall X0. (m1\_subset\_1\ X0\ k4\_ordinal1) \Rightarrow (v7\_ordinal1\ X0) \quad (17)$$

Assume the following.

$$\forall X0. ((\neg v1\_xboole\_0\ X0) \wedge (v7\_ordinal1\ X0)) \Rightarrow ((\neg v1\_xboole\_0\ X0) \wedge ((v7\_ordinal1\ X0) \wedge (\neg v1\_setfam\_1\ X0))) \quad (18)$$

Assume the following.

$$\forall X0. \forall X1. (l1\_extpro\_1\ X1\ X0) \Rightarrow ((v1\_extpro\_1\ X1\ X0) \Rightarrow (X1 = g1\_extpro\_1\ X0\ (u1\_struct\_0\ X1)\ (u2\_struct\_0\ X1)\ (u1\_compos\_1\ X1)\ (u1\_memstr\_0\ X0\ X1)\ (u2\_memstr\_0\ X0\ X1)\ (u1\_extpro\_1\ X0\ X1))) \quad (19)$$

**Theorem 1**  $k2\_memstr\_0\ np\_2\ k1\_ami\_3 = k3\_relat\_1\ k3\_ami\_2\ k4\_ami\_2.$