

# t10\_ami\_2

## (TMVrxpcoHG52n4CPKJ2bTjxgi9ZLVto6S8m)

October 27, 2020

Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_ami\_2 : \iota$  be given. Let  $k2\_ami\_2 : \iota$  be given. Let  $k5\_card\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k4\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_scm\_inst : \iota$  be given. Let  $v2\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_2 : \iota$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_ami\_2) \Rightarrow ((X0 \in k2\_ami\_2) \Rightarrow (k1\_funct\_1 (k3\_relat\_1 k3\_ami\_2 k4\_ami\_2) X0 = k4\_numbers)) \quad (1)$$

Assume the following.

$$\forall X0.\forall X1.(m1\_subset\_1 X0 X1) \Rightarrow ((v1\_xboole\_0 X1) \vee (X0 \in X1)) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1)) \Rightarrow ((X0 \in k9\_xtuple\_0 X1) \Rightarrow ((k4\_card\_3 X1 = k1\_xboole\_0) \vee (k5\_card\_3 X0 (k4\_card\_3 X1) = k1\_funct\_1 X1 X0))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2.(m2\_subset\_1 X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \quad (4)$$

Assume the following.

$$k2\_ami\_2 = k2\_scm\_inst \quad (5)$$

Assume the following.

$$k9\_xtuple\_0 (k3\_relat\_1 k3\_ami\_2 k4\_ami\_2) = k1\_ami\_2 \quad (6)$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge ((v2\_relat\_1 X0) \wedge (v1\_funct\_1 X0))) \Rightarrow (\neg v1\_xboole\_0 (k4\_card\_3 X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \wedge ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1))) \Rightarrow ((v1\_relat\_1 (k3\_relat\_1 X0 X1)) \wedge (v1\_funct\_1 (k3\_relat\_1 X0 X1))) \quad (8)$$

Assume the following.

$$(v1\_relat\_1 (k3\_relat\_1 k3\_ami\_2 k4\_ami\_2)) \wedge (v2\_relat\_1 (k3\_relat\_1 k3\_ami\_2 k4\_ami\_2)) \quad (9)$$

Assume the following.

$$v1\_xboole\_0 k1\_xboole\_0 \quad (10)$$

Assume the following.

$$\neg v1\_xboole\_0 k2\_scm\_inst \quad (11)$$

Assume the following.

$$\neg v1\_xboole\_0 k1\_ami\_2 \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2.(m2\_subset\_1 X2 X0 X1) \Rightarrow (m1\_subset\_1 X2 X0)) \quad (13)$$

Assume the following.

$$(v1\_relat\_1 k4\_ami\_2) \wedge ((v4\_relat\_1 k4\_ami\_2 np\_2) \wedge ((v1\_funct\_1 k4\_ami\_2) \wedge (v1\_partfun1 k4\_ami\_2 np\_2))) \quad (14)$$

Assume the following.

$$(v1\_funct\_1 k3\_ami\_2) \wedge ((v1\_funct\_2 k3\_ami\_2 k1\_ami\_2 np\_2) \wedge (m1\_subset\_1 k3\_ami\_2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k1\_ami\_2 np\_2)))) \quad (15)$$

Assume the following.

$$m1\_subset\_1 k2\_ami\_2 (k1\_zfmisc\_1 k1\_ami\_2) \quad (16)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \Rightarrow (v1\_relat\_1 X2) \quad (17)$$

**Theorem 1**

$$\forall X0.(m2\_subset\_1 X0 k1\_ami\_2 k2\_ami\_2) \Rightarrow (k5\_card\_3 X0 (k4\_card\_3 (k3\_relat\_1 k3\_ami\_2 k4\_ami\_2)) = k4\_numbers)$$