

## t8\_ami\_wstd

(TMNt2XuEtoXEUHqufo2gmPnvaT8Fn37hWDF)

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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  $v2\_ami\_wstd : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Let  $r1\_ami\_wstd : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_ami\_wstd : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k4\_ordinal1 : \iota$  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  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $v3\_xxreal\_2 : \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $v4\_xxreal\_2 : \iota \Rightarrow o$  be given. Let  $v3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge \\ (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2. (m2\_subset\_1 \\ X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \end{aligned} \quad (2)$$

Assume the following.

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

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1\_xboole\_0 X0) \wedge \\ (((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 X0 X1) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 \\ (k2\_zfmisc\_1 X0 X1)))))) \wedge (m1\_subset\_1 X3 X0))) \Rightarrow (k3\_funct\_2 X0 \\ X1 X2 X3 = k1\_funct\_1 X2 X3) \end{aligned} \quad (4)$$

Assume the following.

$$\neg v1\_finset\_1 k4\_ordinal1 \quad (5)$$

Assume the following.

$$(\neg v3\_xxreal\_2\ k1\_numbers) \wedge (\neg v4\_xxreal\_2\ k1\_numbers) \quad (6)$$

Assume the following.

$$m1\_subset\_1\ k5\_numbers\ (k1\_zfmisc\_1\ k1\_numbers) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((\neg v1\_xboole\_0\ X0) \wedge \\ & (((v1\_funct\_1\ X2) \wedge ((v1\_funct\_2\ X2\ X0\ X1) \wedge (m1\_subset\_1\ X2\ (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1\ X0\ X1)))))) \wedge (m1\_subset\_1\ X3\ X0))) \Rightarrow (m1\_subset\_1\ ( \\ & k3\_funct\_2\ X0\ X1\ X2\ X3)\ X1) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1\_setfam\_1\ X0) \wedge (((\neg v2\_struct\_0 \\ & X1) \wedge ((v2\_memstr\_0\ X1\ X0) \wedge ((v3\_memstr\_0\ X1\ X0) \wedge ((v2\_ami\_wstd \\ & X1\ X0) \wedge (l1\_extpro\_1\ X1\ X0)))))) \wedge (v7\_ordinal1\ X2))) \Rightarrow (m2\_subset\_1 \\ & (k1\_ami\_wstd\ X0\ X1\ X2)\ k1\_numbers\ k5\_numbers) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. (\neg v1\_setfam\_1\ X0) \Rightarrow (\forall X1. ((\neg v2\_struct\_0\ X1) \wedge \\ & ((v2\_memstr\_0\ X1\ X0) \wedge ((v3\_memstr\_0\ X1\ X0) \wedge ((v2\_ami\_wstd\ X1\ X0) \wedge \\ & (l1\_extpro\_1\ X1\ X0)))))) \Rightarrow (\forall X2. (v7\_ordinal1\ X2) \Rightarrow (\forall X3. \\ & (m2\_subset\_1\ X3\ k1\_numbers\ k5\_numbers) \Rightarrow ((X3 = k1\_ami\_wstd\ X0\ X1 \\ & X2) \Leftrightarrow (\exists X4. ((v1\_funct\_1\ X4) \wedge ((v1\_funct\_2\ X4\ k5\_numbers \\ & k5\_numbers) \wedge (m1\_subset\_1\ X4\ (k1\_zfmisc\_1\ (k2\_zfmisc\_1\ k5\_numbers \\ & k5\_numbers)))))) \wedge ((v3\_funct\_2\ X4\ k5\_numbers\ k5\_numbers) \wedge ((\forall X5. \\ & (m2\_subset\_1\ X5\ k1\_numbers\ k5\_numbers) \Rightarrow (\forall X6. (m2\_subset\_1 \\ & X6\ k1\_numbers\ k5\_numbers) \Rightarrow ((r1\_xxreal\_0\ X5\ X6) \Leftrightarrow (r1\_ami\_wstd \\ & X0\ X1\ (k3\_funct\_2\ k5\_numbers\ k5\_numbers\ X4\ X5)\ (k3\_funct\_2\ k5\_numbers \\ & k5\_numbers\ X4\ X6)))))) \wedge (X3 = k1\_funct\_1\ X4\ X2)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0. (v7\_ordinal1\ X0) \Leftrightarrow (X0 \in k4\_ordinal1) \quad (11)$$

Assume the following.

$$\forall X0. (v6\_membered\ X0) \Rightarrow ((v6\_membered\ X0) \wedge (v3\_xxreal\_2\ X0)) \quad (12)$$

Assume the following.

$$\forall X0. (v1\_xboole\_0\ X0) \Rightarrow (v1\_finset\_1\ X0) \quad (13)$$

Assume the following.

$$\forall X0. (v1\_xboole\_0\ X0) \Rightarrow (v6\_membered\ X0) \quad (14)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(\neg v1\_setfam\_1 X0) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge \\ & ((v2\_memstr\_0 X1 X0) \wedge ((v3\_memstr\_0 X1 X0) \wedge ((v2\_ami\_wstd X1 X0) \wedge \\ & (l1\_extpro\_1 X1 X0)))))) \Rightarrow (\forall X2.(v7\_ordinal1 X2) \Rightarrow (\forall X3. \\ & (v7\_ordinal1 X3) \Rightarrow ((r1\_ami\_wstd X0 X1 (k1\_ami\_wstd X0 X1 X2) (k1\_ami\_wstd \\ & X0 X1 X3)) \Leftrightarrow (r1\_xreal\_0 X2 X3)))))) \end{aligned}$$