

t23\_ami\_wstd (TMZZD-  
HiKq1h5BdVHwunrENguDqKwCa2CpEi)

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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  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_compos\_1 : \iota \Rightarrow \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finset\_1 : \iota \Rightarrow o$  be given. Let  $v5\_amistd\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_ami\_wstd : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v4\_ami\_wstd : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  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  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & \forall X0. (\neg v1\_setfam\_1 X0) \Rightarrow (\forall X1. ((\neg v2\_struct\_0 X1) \wedge \\
 & ((v2\_memstr\_0 X1 X0) \wedge ((v3\_memstr\_0 X1 X0) \wedge (l1\_extpro\_1 X1 X0)))) \Rightarrow \\
 & (\forall X2. ((v1\_relat\_1 X2) \wedge ((v4\_relat\_1 X2 k5\_numbers) \wedge (( \\
 & v5\_relat\_1 X2 (u1\_compos\_1 X1)) \wedge ((v1\_funct\_1 X2) \wedge (v1\_finset\_1 \\
 & X2)))) \Rightarrow ((v5\_amistd\_1 X2 X0 X1) \Leftrightarrow (\forall X3. ((v1\_relat\_1 X3) \wedge \\
 & ((v4\_relat\_1 X3 (u1\_struct\_0 X1)) \wedge ((v1\_funct\_1 X3) \wedge ((v5\_funct\_1 \\
 & X3 (k2\_memstr\_0 X0 X1)) \wedge (v1\_partfun1 X3 (u1\_struct\_0 X1)))))) \Rightarrow \\
 & ((k5\_memstr\_0 X0 X1 X3 \in k1\_relset\_1 k5\_numbers X2) \Rightarrow (\forall X4. \\
 & (m2\_subset\_1 X4 k1\_numbers k5\_numbers) \Rightarrow (k5\_memstr\_0 X0 X1 (k5\_extpro\_1 \\
 & X0 X1 X2 X3 X4) \in k1\_relset\_1 k5\_numbers X2))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1\_setfam\_1 X0) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge \\
& ((v2\_memstr\_0 X1 X0) \wedge ((v3\_memstr\_0 X1 X0) \wedge ((v2\_ami\_wstd X1 X0) \wedge \\
& (l1\_extpro\_1 X1 X0)))))) \Rightarrow (\forall X2.((v1\_relat\_1 X2) \wedge ((v4\_relat\_1 \\
& X2 k5\_numbers) \wedge ((v5\_relat\_1 X2 (u1\_compos\_1 X1)) \wedge (v1\_funct\_1 \\
& X2)))) \Rightarrow ((v4\_ami\_wstd X2 X0 X1) \Leftrightarrow (\forall X3.((v1\_relat\_1 X3) \wedge \\
& ((v4\_relat\_1 X3 (u1\_struct\_0 X1)) \wedge ((v1\_funct\_1 X3) \wedge ((v5\_funct\_1 \\
& X3 (k2\_memstr\_0 X0 X1)) \wedge (v1\_partfun1 X3 (u1\_struct\_0 X1)))))) \Rightarrow \\
& ((k5\_memstr\_0 X0 X1 X3 = k1\_ami\_wstd X0 X1 k6\_numbers) \Rightarrow (\forall X4. \\
& (m2\_subset\_1 X4 k1\_numbers k5\_numbers) \Rightarrow (k5\_memstr\_0 X0 X1 (k5\_extpro\_1 \\
& X0 X1 X2 X3 X4) \in k1\_relset\_1 k5\_numbers X2))))))
\end{aligned} \tag{2}$$

**Theorem 1**

$$\begin{aligned}
& \forall X0.(\neg v1\_setfam\_1 X0) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge \\
& ((v2\_memstr\_0 X1 X0) \wedge ((v3\_memstr\_0 X1 X0) \wedge ((v2\_ami\_wstd X1 X0) \wedge \\
& (l1\_extpro\_1 X1 X0)))))) \Rightarrow (\forall X2.((v1\_relat\_1 X2) \wedge ((v4\_relat\_1 \\
& X2 k5\_numbers) \wedge ((v5\_relat\_1 X2 (u1\_compos\_1 X1)) \wedge ((v1\_funct\_1 \\
& X2) \wedge (v1\_finset\_1 X2)))))) \Rightarrow (((v5\_amistd\_1 X2 X0 X1) \wedge (k1\_ami\_wstd \\
& X0 X1 k6\_numbers \in k1\_relset\_1 k5\_numbers X2)) \Rightarrow (v4\_ami\_wstd X2 \\
& X0 X1)))
\end{aligned}$$