

# t4\_ami\_wstd (TMPKPNyaQRkPoUNMZnsqzn- RZVWEtdruMdkj)

October 27, 2020

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  $l1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_ami\_wstd : \iota \Rightarrow \iota \Rightarrow o$  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  $k5\_numbers : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k3\_amistd\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_ami\_wstd : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned}
& \forall X0. (\neg v1\_setfam\_1 X0) \Rightarrow (\forall X1. ((\neg v2\_struct\_0 X1) \wedge \\
& ((v2\_memstr\_0 X1 X0) \wedge ((v3\_memstr\_0 X1 X0) \wedge (l1\_extpro\_1 X1 X0)))) \Rightarrow \\
& (\forall X2. ((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 X2 k5\_numbers k5\_numbers) \wedge \\
& (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers k5\_numbers)))))) \Rightarrow \\
& ((v3\_funct\_2 X2 k5\_numbers k5\_numbers) \Rightarrow ((\forall X3. (m2\_subset\_1 \\
& X3 k1\_numbers k5\_numbers) \Rightarrow (\forall X4. (m2\_subset\_1 X4 k1\_numbers \\
& k5\_numbers) \Rightarrow ((r1\_xxreal\_0 X3 X4) \Leftrightarrow (r1\_ami\_wstd X0 X1 (k3\_funct\_2 \\
& k5\_numbers k5\_numbers X2 X3) (k3\_funct\_2 k5\_numbers k5\_numbers \\
& X2 X4)))))) \Leftrightarrow (\forall X3. (m2\_subset\_1 X3 k1\_numbers k5\_numbers) \Rightarrow \\
& ((k3\_funct\_2 k5\_numbers k5\_numbers X2 (k2\_nat\_1 X3 np\_1) \in k3\_amistd\_1 \\
& X0 X1 (k3\_funct\_2 k5\_numbers k5\_numbers X2 X3)) \wedge (\forall X4. (m2\_subset\_1 \\
& X4 k1\_numbers k5\_numbers) \Rightarrow ((k3\_funct\_2 k5\_numbers k5\_numbers \\
& X2 X4 \in k3\_amistd\_1 X0 X1 (k3\_funct\_2 k5\_numbers k5\_numbers X2 X3)) \Rightarrow \\
& (r1\_xxreal\_0 X3 X4)))))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.(\neg v1\_setfam\_1 X0) \Rightarrow (\forall X1.((\neg v2\_struct\_0 X1) \wedge \\
& ((v2\_memstr\_0 X1 X0) \wedge ((v3\_memstr\_0 X1 X0) \wedge (l1\_extpro\_1 X1 X0)))) \Rightarrow \\
& ((v2\_ami\_wstd X1 X0) \Leftrightarrow (\exists X2.((v1\_funct\_1 X2) \wedge ((v1\_funct\_2 \\
& X2 k5\_numbers k5\_numbers) \wedge (m1\_subset\_1 X2 (k1\_zfmisc\_1 (k2\_zfmisc\_1 \\
& k5\_numbers k5\_numbers)))))) \wedge ((v3\_funct\_2 X2 k5\_numbers k5\_numbers) \wedge \\
& (\forall X3.(m2\_subset\_1 X3 k1\_numbers k5\_numbers) \Rightarrow (\forall X4. \\
& (m2\_subset\_1 X4 k1\_numbers k5\_numbers) \Rightarrow ((r1\_xxreal\_0 X3 X4) \Leftrightarrow \\
& (r1\_ami\_wstd X0 X1 (k3\_funct\_2 k5\_numbers k5\_numbers X2 X3) (k3\_funct\_2 \\
& k5\_numbers k5\_numbers X2 X4))))))))))
\end{aligned} \tag{2}$$

**Theorem 1**

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