

# t9\_waybel24 (TMHT- StQkGD2LKFLrmwcFvvRavb9hme9LQjj)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $l1\_orders\_2 : \iota \Rightarrow o$  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  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_yellow\_3 : \iota \Rightarrow \iota \Rightarrow \iota$  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  $k3\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_waybel24 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_waybel24 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_binop\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\
& ((\neg v2\_struct\_0 X1) \wedge (l1\_orders\_2 X1)) \Rightarrow (\forall X2.((\neg v2\_struct\_0 \\
& X2) \wedge (l1\_orders\_2 X2)) \Rightarrow (\forall X3.((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 \\
& X3 (u1\_struct\_0 (k3\_yellow\_3 X2 X1)) (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 \\
& X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 (k3\_yellow\_3 X2 X1)) \\
& (u1\_struct\_0 X0)))))) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 \\
& X1)) \Rightarrow (\forall X5.(m1\_subset\_1 X5 (u1\_struct\_0 X2)) \Rightarrow (k3\_funct\_2 \\
& (u1\_struct\_0 X2) (u1\_struct\_0 X0) (k2\_waybel24 X2 X1 X0 X3 X4) X5 = \\
& k1\_binop\_1 X3 X5 X4))))))
\end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\
& ((\neg v2\_struct\_0 X1) \wedge (l1\_orders\_2 X1)) \Rightarrow (\forall X2.((\neg v2\_struct\_0 \\
& X2) \wedge (l1\_orders\_2 X2)) \Rightarrow (\forall X3.((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 \\
& X3 (u1\_struct\_0 (k3\_yellow\_3 X1 X2)) (u1\_struct\_0 X0)) \wedge (m1\_subset\_1 \\
& X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 (k3\_yellow\_3 X1 X2)) \\
& (u1\_struct\_0 X0)))))) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 \\
& X1)) \Rightarrow (\forall X5.(m1\_subset\_1 X5 (u1\_struct\_0 X2)) \Rightarrow (k3\_funct\_2 \\
& (u1\_struct\_0 X2) (u1\_struct\_0 X0) (k1\_waybel24 X1 X2 X0 X3 X4) X5 = \\
& k1\_binop\_1 X3 X4 X5))))))
\end{aligned} \tag{2}$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge (l1\_orders\_2 X0)) \Rightarrow (\forall X1. \\ & ((\neg v2\_struct\_0 X1) \wedge (l1\_orders\_2 X1)) \Rightarrow (\forall X2.((\neg v2\_struct\_0 \\ & X2) \wedge (l1\_orders\_2 X2)) \Rightarrow (\forall X3.((v1\_funct\_1 X3) \wedge ((v1\_funct\_2 \\ & X3 (u1\_struct\_0 (k3\_yellow\_3 X0 X1)) (u1\_struct\_0 X2)) \wedge (m1\_subset\_1 \\ & X3 (k1\_zfmisc\_1 (k2\_zfmisc\_1 (u1\_struct\_0 (k3\_yellow\_3 X0 X1)) \\ & (u1\_struct\_0 X2)))))) \Rightarrow (\forall X4.(m1\_subset\_1 X4 (u1\_struct\_0 \\ & X0)) \Rightarrow (\forall X5.(m1\_subset\_1 X5 (u1\_struct\_0 X1)) \Rightarrow (k3\_funct\_2 \\ & (u1\_struct\_0 X1) (u1\_struct\_0 X2) (k1\_waybel24 X0 X1 X2 X3 X4) X5 = \\ & k3\_funct\_2 (u1\_struct\_0 X0) (u1\_struct\_0 X2) (k2\_waybel24 X0 X1 \\ & X2 X3 X5) X4)))))) \end{aligned}$$