

# t7\_waybel\_5 (TMJMMsx- AxWMnLgk6t2pi7PUQFFfRGCfmgRw)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funcop\_1 : \iota \Rightarrow o$  be given. Let  $k1\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_card\_3 : \iota \Rightarrow \iota$  be given. Let  $k2\_funct\_6 : \iota \Rightarrow \iota$  be given. Let  $k2\_pralg\_2 : \iota \Rightarrow \iota$  be given. Let  $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v1\_partfun1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0. (&(v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_funcop\_1 X0))) \Rightarrow \\ &(((v1\_relat\_1 (k2\_pralg\_2 X0)) \wedge ((v4\_relat\_1 (k2\_pralg\_2 X0) ( \\ &k4\_card\_3 (k2\_funct\_6 X0))) \wedge ((v1\_funct\_1 (k2\_pralg\_2 X0)) \wedge ( \\ &(v1\_partfun1 (k2\_pralg\_2 X0) (k4\_card\_3 (k2\_funct\_6 X0))) \wedge (v1\_funcop\_1 \\ &(k2\_pralg\_2 X0)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow ((v1\_relat\_1 (k2\_funct\_6 X0)) \wedge (v1\_funct\_1 (k2\_funct\_6 X0))) \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0. (&(v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. (X1 = \\ &k4\_card\_3 X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow (\exists X3. ((v1\_relat\_1 \\ &X3) \wedge (v1\_funct\_1 X3)) \wedge ((X2 = X3) \wedge ((k9\_xtuple\_0 X3 = k9\_xtuple\_0 \\ &X0) \wedge (\forall X4. (X4 \in k9\_xtuple\_0 X0) \Rightarrow (k1\_funct\_1 X3 X4 \in k1\_funct\_1 \\ &X0 X4)))))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_relat\_1 X1) \wedge (v4\_relat\_1 X1 X0)) \Rightarrow ((v1\_partfun1 X1 X0) \Leftrightarrow (k1\_relset\_1 X0 X1 = X0)) \tag{4}$$

## Theorem 1

$$\begin{aligned} \forall X0. (&(v1\_relat\_1 X0) \wedge ((v1\_funct\_1 X0) \wedge (v1\_funcop\_1 X0))) \Rightarrow \\ &(\forall X1. (X1 \in k1\_relset\_1 (k4\_card\_3 (k2\_funct\_6 X0)) (k2\_pralg\_2 \\ &X0)) \Rightarrow ((v1\_relat\_1 X1) \wedge (v1\_funct\_1 X1))) \end{aligned}$$