

## t47\_funct\_5

(TMW4XhFdBhyLv2Ck9WfXByTMcA7HLenGsMk)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_funct\_5 : \iota \Rightarrow \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_funct\_4 : \iota \Rightarrow \iota$  be given. Let  $k2\_funct\_5 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 \\ & X2)) \Rightarrow ((r1\_tarski (k9\_xtuple\_0 X2) (k2\_zfmisc\_1 X0 X1)) \Rightarrow (k2\_funct\_4 \\ & (k2\_funct\_4 X2) = X2)) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 \\ & X2)) \Rightarrow (\forall X3. ((v1\_relat\_1 X3) \wedge (v1\_funct\_1 X3)) \Rightarrow (((r1\_tarski \\ & (k10\_xtuple\_0 X2) (k1\_funct\_2 X0 X1)) \wedge ((r1\_tarski (k10\_xtuple\_0 \\ & X3) (k1\_funct\_2 X0 X1)) \wedge (k2\_funct\_5 X2 = k2\_funct\_5 X3))) \Rightarrow ((X0 = \\ & k1\_xboole\_0) \vee (X2 = X3)))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 \\ & X2)) \Rightarrow ((r1\_tarski (k10\_xtuple\_0 X2) (k1\_funct\_2 X0 X1)) \Rightarrow ((k9\_xtuple\_0 \\ & (k2\_funct\_5 X2) = k2\_zfmisc\_1 (k9\_xtuple\_0 X2) X0) \wedge (k9\_xtuple\_0 \\ & (k4\_funct\_5 X2) = k2\_zfmisc\_1 X0 (k9\_xtuple\_0 X2)))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0. \forall X1. r1\_tarski X0 X0 \tag{4}$$

Assume the following.

$$\forall X0. ((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow ((v1\_relat\_1 (k2\_funct\_5 X0)) \wedge (v1\_funct\_1 (k2\_funct\_5 X0))) \tag{5}$$

Assume the following.

$$\forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (k4\_funct\_5 X0 = k2\_funct\_4 (k2\_funct\_5 X0)) \quad (6)$$

**Theorem 1**

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((v1\_relat\_1 X2) \wedge (v1\_funct\_1 \\ & X2)) \Rightarrow (\forall X3. ((v1\_relat\_1 X3) \wedge (v1\_funct\_1 X3)) \Rightarrow (((r1\_tarski \\ & (k10\_xtuple\_0 X2) (k1\_funct\_2 X0 X1)) \wedge ((r1\_tarski (k10\_xtuple\_0 \\ & X3) (k1\_funct\_2 X0 X1)) \wedge (k4\_funct\_5 X2 = k4\_funct\_5 X3))) \Rightarrow ((X0 = \\ & k1\_xboole\_0) \vee (X2 = X3)))) \end{aligned}$$