

## t3\_turing\_1

(TMU9jeMVmwd91zjhJ8S5xAJY6CnBM2mXx4g)

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Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_4 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k16\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ \forall X3.(X1 \neq X3) \Rightarrow (k1\_funct\_1 (k1\_funct\_4 X0 (k16\_funcop\_1 \\ X1 X2)) X3 = k1\_funct\_1 X0 X3)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. \forall X3. (k4\_tarski X0 X1 = \\ k4\_tarski X2 X3) \Rightarrow ((X0 = X2) \wedge (X1 = X3)) \end{aligned} \quad (2)$$

### Theorem 1

$$\begin{aligned} \forall X0.((v1\_relat\_1 X0) \wedge (v1\_funct\_1 X0)) \Rightarrow (\forall X1. \forall X2. \\ \forall X3. \forall X4. \forall X5.(X5 \neq X2) \Rightarrow (k1\_funct\_1 (k1\_funct\_4 \\ X0 (k16\_funcop\_1 (k4\_tarski X1 X2) X3)) (k4\_tarski X4 X5) = k1\_funct\_1 \\ X0 (k4\_tarski X4 X5))) \end{aligned}$$