

# t27\_substut1 (TMTjQhFXVMpQD- fiChdyuXQzpZ5Dxa7GaS21)

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Let  $m1\_qc\_lang1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k16\_substut1 : \iota \Rightarrow \iota$  be given. Let  $v4\_substut1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v5\_substut1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v6\_substut1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v7\_substut1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $v2\_substut1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k11\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k18\_substut1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $np\_3 : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $k8\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k16\_substut1 \\ X0)) \Rightarrow ((v4\_substut1 X1 X0) \Rightarrow ((k1\_xtuple\_0 (k1\_funct\_1 (k11\_qc\_lang1 \\ X0 (k18\_substut1 X0 X1)) np\_1) \neq k6\_numbers) \wedge ((k1\_xtuple\_0 (k1\_funct\_1 \\ (k11\_qc\_lang1 X0 (k18\_substut1 X0 X1)) np\_1) \neq np\_1) \wedge ((k1\_xtuple\_0 \\ (k1\_funct\_1 (k11\_qc\_lang1 X0 (k18\_substut1 X0 X1)) np\_1) \neq np\_2) \wedge \\ (k1\_xtuple\_0 (k1\_funct\_1 (k11\_qc\_lang1 X0 (k18\_substut1 X0 X1)) \\ np\_1) \neq np\_3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k16\_substut1 \\ X0)) \Rightarrow (((v2\_substut1 X1 X0) \Rightarrow (k1\_xtuple\_0 (k1\_funct\_1 (k11\_qc\_lang1 \\ X0 (k18\_substut1 X0 X1)) np\_1) = k6\_numbers) \wedge ((\neg(v4\_substut1 \\ X1 X0) \wedge (\forall X2.(m1\_subset\_1 X2 k5\_numbers) \Rightarrow (\neg m2\_subset\_1 \\ (k1\_funct\_1 (k11\_qc\_lang1 X0 (k18\_substut1 X0 X1)) np\_1) (k6\_qc\_lang1 \\ X0) (k8\_qc\_lang1 X0 X2)))) \wedge ((v5\_substut1 X1 X0) \Rightarrow (k1\_xtuple\_0 \\ (k1\_funct\_1 (k11\_qc\_lang1 X0 (k18\_substut1 X0 X1)) np\_1) = np\_1)) \wedge \\ (((v6\_substut1 X1 X0) \Rightarrow (k1\_xtuple\_0 (k1\_funct\_1 (k11\_qc\_lang1 \\ X0 (k18\_substut1 X0 X1)) np\_1) = np\_2)) \wedge ((v7\_substut1 X1 X0) \Rightarrow \\ (k1\_xtuple\_0 (k1\_funct\_1 (k11\_qc\_lang1 X0 (k18\_substut1 X0 X1)) \\ np\_1) = np\_3)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\neg v1\_xboole\_0 \ np\_3 \tag{3}$$

Assume the following.

$$\neg v1\_xboole\_0 \ np\_2 \tag{4}$$

Assume the following.

$$\neg v1\_xboole\_0 \ np\_1 \tag{5}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{6}$$

Assume the following.

$$v1\_xboole\_0 \ k1\_xboole\_0 \tag{7}$$

**Theorem 1**

$$\begin{aligned} \forall X0.(m1\_qc\_lang1 \ X0) \Rightarrow (\forall X1.(m1\_subset\_1 \ X1 \ (k16\_subst1 \\ X0)) \Rightarrow ((\neg(v4\_subst1 \ X1 \ X0) \wedge (v5\_subst1 \ X1 \ X0)) \wedge ((\neg(v4\_subst1 \\ X1 \ X0) \wedge (v6\_subst1 \ X1 \ X0)) \wedge ((\neg(v4\_subst1 \ X1 \ X0) \wedge (v7\_subst1 \\ X1 \ X0)) \wedge ((\neg(v5\_subst1 \ X1 \ X0) \wedge (v6\_subst1 \ X1 \ X0)) \wedge ((\neg(v5\_subst1 \\ X1 \ X0) \wedge (v7\_subst1 \ X1 \ X0)) \wedge ((\neg(v6\_subst1 \ X1 \ X0) \wedge (v7\_subst1 \\ X1 \ X0)) \wedge ((\neg(v2\_subst1 \ X1 \ X0) \wedge (v4\_subst1 \ X1 \ X0)) \wedge ((\neg(v2\_subst1 \\ X1 \ X0) \wedge (v5\_subst1 \ X1 \ X0)) \wedge ((\neg(v2\_subst1 \ X1 \ X0) \wedge (v6\_subst1 \\ X1 \ X0)) \wedge (\neg(v2\_subst1 \ X1 \ X0) \wedge (v7\_subst1 \ X1 \ X0))))))))))))) \end{aligned}$$