

t27\_qc\_lang1  
(TMSuFMRVj8wiscRw2Yv9GiFAH5kFgsswA48)

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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  $k1\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $r2\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k28\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k27\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k25\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r1\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0. \forall X1. ((m1\_qc\_lang1 X0) \wedge (m1\_subset\_1 X1 (k1\_qc\_lang1 X0))) \Rightarrow ((\neg v1\_xboole\_0 (k27\_qc\_lang1 X0 X1)) \wedge (m1\_subset\_1 (k27\_qc\_lang1 X0 X1) (k1\_zfmisc\_1 (k1\_qc\_lang1 X0)))) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. ((m1\_qc\_lang1 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_qc\_lang1 X0))))) \Rightarrow (m1\_subset\_1 (k25\_qc\_lang1 X0 X1) (k1\_qc\_lang1 X0)) \quad (2)$$

Assume the following.

$$\forall X0. (m1\_qc\_lang1 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_qc\_lang1 X0)) \Rightarrow (k28\_qc\_lang1 X0 X1 = k25\_qc\_lang1 X0 (k27\_qc\_lang1 X0 X1))) \quad (3)$$

Assume the following.

$$\forall X0. (m1\_qc\_lang1 X0) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (k1\_qc\_lang1 X0)) \Rightarrow (k27\_qc\_lang1 X0 X1 = ReplSep (toset (\lambda X2 : \iota. m1\_subset\_1 X2 (k1\_qc\_lang1 X0))) (\lambda X2 : \iota. r2\_qc\_lang1 X0 X1 X2) (\lambda X2 : \iota. X2))) \quad (4)$$

Assume the following.

$$\forall X0. (m1\_qc\_lang1 X0) \Rightarrow (\forall X1. ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k1\_qc\_lang1 X0)))) \Rightarrow (\forall X2. (m1\_subset\_1 X2 (k1\_qc\_lang1 X0)) \Rightarrow ((X2 = k25\_qc\_lang1 X0 X1) \Leftrightarrow ((X2 \in X1) \wedge (\forall X3. (m1\_subset\_1 X3 (k1\_qc\_lang1 X0)) \Rightarrow ((X3 \in X1) \Rightarrow (r1\_qc\_lang1 X0 X2 X3))))))) \quad (5)$$

**Theorem 1**

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (k1\_qc\_lang1\ X0)) \Rightarrow (r2\_qc\_lang1\ X0\ X1\ (k28\_qc\_lang1\ X0\ X1)))$$