t68_cqc_the1
(TMYgPt8cdqj86yGF5pgg5TifREEmwAVP9Dy)

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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 $k9\_qc\_lang1 : \iota{\Rightarrow}\iota$ be given. Let $m2\_subset\_1 : \iota{\Rightarrow}\iota{\Rightarrow}\iota{\Rightarrow}o$ be given. Let $k2\_qc\_lang1 : \iota{\Rightarrow}\iota$ be given. Let $k3\_qc\_lang1 : \iota{\Rightarrow}\iota$ be given. Let $k13\_cqc\_lang : \iota{\Rightarrow}\iota{\Rightarrow}\iota{\Rightarrow}\iota$ be given. Let $k3\_cqc\_lang : \iota{\Rightarrow}\iota$ be given. Let $v2\_cqc\_the1 : \iota{\Rightarrow}\iota{\Rightarrow}o$ be given. Let $k24\_qc\_lang1 : \iota{\Rightarrow}\iota{\Rightarrow}\iota$ be given. Let $k1\_zfmisc\_1 : \iota{\Rightarrow}\iota$ be given. Let $r3\_cqc\_the1 : \iota{\Rightarrow}\iota{\Rightarrow}\iota{\Rightarrow}o$ be given. Let $v1\_xboole\_0 : \iota{\Rightarrow}o$ be given. Let $k1\_subset\_1 : \iota{\Rightarrow}\iota$ be given. Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0){\Rightarrow}(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1$$
$$(k3\_cqc\_lang\ X0))){\Rightarrow}(\forall X2.(m1\_subset\_1\ X2\ (k9\_qc\_lang1$$
$$X0)){\Rightarrow}(\forall X3.(m2\_subset\_1\ X3\ (k2\_qc\_lang1\ X0)\ (k3\_qc\_lang1$$
$$X0)){\Rightarrow}(\forall X4.(m2\_subset\_1\ X4\ (k2\_qc\_lang1\ X0)\ (k3\_qc\_lang1$$
$$X0)){\Rightarrow}(((k13\_cqc\_lang\ X0\ X2\ X3 \in k3\_cqc\_lang\ X0){\wedge}(r3\_cqc\_the1\ X0$$
$$X1\ (k13\_cqc\_lang\ X0\ X2\ X4)))){\Rightarrow}((X4 \in k24\_qc\_lang1\ X0\ X2){\vee}(r3\_cqc\_the1$$
$$X0\ X1\ (k13\_cqc\_lang\ X0\ X2\ X3))))))))))$$

(1)

Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \in X1){\wedge}(m1\_subset\_1\ X1\ (k1\_zfmisc\_1$$
$$X2))){\Rightarrow}(m1\_subset\_1\ X0\ X2)$$

(2)

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X0){\wedge}((\neg v1\_xboole\_0\ X1){\wedge}$$
$$(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0)))){\Rightarrow}(\forall X2.(m2\_subset\_1$$
$$X2\ X0\ X1){\Leftrightarrow}(m1\_subset\_1\ X2\ X1))$$

(3)

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0){\Rightarrow}(\neg v1\_xboole\_0\ (k3\_qc\_lang1\ X0))$$

(4)

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0){\Rightarrow}(m1\_subset\_1\ (k3\_qc\_lang1\ X0)\ (k1\_zfmisc\_1$$
$$(k2\_qc\_lang1\ X0)))$$

(5)

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0){\Rightarrow}(m1\_subset\_1\ (k3\_cqc\_lang\ X0)\ (k1\_zfmisc\_1 \\ (k9\_qc\_lang1\ X0)))$$

(6)

Assume the following.

$$\forall X0.m1\_subset\_1\ (k1\_subset\_1\ X0)\ (k1\_zfmisc\_1\ X0)$$

(7)

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_qc\_lang1\ X0){\wedge}((m1\_subset\_1 \\ X1\ (k9\_qc\_lang1\ X0)){\wedge}(m1\_subset\_1\ X2\ (k3\_qc\_lang1\ X0)))){\Rightarrow}(m1\_subset\_1 \\ (k13\_cqc\_lang\ X0\ X1\ X2)\ (k9\_qc\_lang1\ X0))$$

(8)

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0){\Rightarrow}(\forall X1.(m1\_subset\_1\ X1\ (k9\_qc\_lang1 \\ X0)){\Rightarrow}((v2\_cqc\_the1\ X1\ X0){\Leftrightarrow}(r3\_cqc\_the1\ X0\ (k1\_subset\_1\ (k3\_cqc\_lang \\ X0))\ X1)))$$

(9)

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0){\Rightarrow}(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1 \\ X0)){\Rightarrow}(v1\_xboole\_0\ X1))$$

(10)

Theorem 1

$$\forall X0.(m1\_qc\_lang1\ X0){\Rightarrow}(\forall X1.(m1\_subset\_1\ X1\ (k9\_qc\_lang1 \\ X0)){\Rightarrow}(\forall X2.(m2\_subset\_1\ X2\ (k2\_qc\_lang1\ X0)\ (k3\_qc\_lang1 \\ X0)){\Rightarrow}(\forall X3.(m2\_subset\_1\ X3\ (k2\_qc\_lang1\ X0)\ (k3\_qc\_lang1 \\ X0)){\Rightarrow}(((k13\_cqc\_lang\ X0\ X1\ X2 \in k3\_cqc\_lang\ X0){\wedge}(v2\_cqc\_the1\ (\\ k13\_cqc\_lang\ X0\ X1\ X3)\ X0)){\Rightarrow}((X3 \in k24\_qc\_lang1\ X0\ X1){\vee}(v2\_cqc\_the1 \\ (k13\_cqc\_lang\ X0\ X1\ X2)\ X0))))))$$