

## t35\_valuat\_1

(TMaZN6RoKivqS2R6hhojtRcvyyeDrDx9oUW)

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Let  $m1\_qc\_lang1 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $k2\_valuat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k9\_qc\_lang1 : \iota \Rightarrow \iota$  be given. Let  $k3\_cqc\_lang : \iota \Rightarrow \iota$  be given. Let  $m1\_valuat\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_valuat\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k8\_cqc\_lang : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_cqc\_lang : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(\neg v1\_xboole\_0 X1) \Rightarrow ( \\ & \forall X2.(m2\_funct\_2 X2 (k3\_qc\_lang1 X0) X1 (k2\_valuat\_1 X0 X1)) \Rightarrow \\ & (\forall X3.(m2\_subset\_1 X3 (k9\_qc\_lang1 X0) (k3\_cqc\_lang X0)) \Rightarrow \\ & (\forall X4.(m2\_subset\_1 X4 (k9\_qc\_lang1 X0) (k3\_cqc\_lang X0)) \Rightarrow \\ & (\forall X5.(m1\_valuat\_1 X5 X0 X1) \Rightarrow ((r1\_valuat\_1 X0 X1 (k8\_cqc\_lang \\ & X0 X3 X4) X5 X2) \Leftrightarrow ((r1\_valuat\_1 X0 X1 X3 X5 X2) \Rightarrow (r1\_valuat\_1 X0 X1 X4 \\ & X5 X2)))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(\neg v1\_xboole\_0 X1) \Rightarrow ( \\ & \forall X2.(m2\_funct\_2 X2 (k3\_qc\_lang1 X0) X1 (k2\_valuat\_1 X0 X1)) \Rightarrow \\ & (\forall X3.(m2\_subset\_1 X3 (k9\_qc\_lang1 X0) (k3\_cqc\_lang X0)) \Rightarrow \\ & (\forall X4.(m1\_valuat\_1 X4 X0 X1) \Rightarrow ((r1\_valuat\_1 X0 X1 (k6\_cqc\_lang \\ & X0 X3) X4 X2) \Leftrightarrow (\neg r1\_valuat\_1 X0 X1 X3 X4 X2)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge \\ & (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2.(m2\_subset\_1 \\ & X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\neg v1\_xboole\_0 (k3\_cqc\_lang X0)) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_qc\_lang1\ X0)\wedge((m1\_subset\_1\ X1\ (k3\_cqc\_lang\ X0))\wedge(m1\_subset\_1\ X2\ (k3\_cqc\_lang\ X0))))\Rightarrow(m2\_subset\_1\ (k8\_cqc\_lang\ X0\ X1\ X2)\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_qc\_lang1\ X0)\wedge(m1\_subset\_1\ X1\ (k3\_cqc\_lang\ X0)))\Rightarrow(m2\_subset\_1\ (k6\_cqc\_lang\ X0\ X1)\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \quad (6)$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0)\Rightarrow(m1\_subset\_1\ (k3\_cqc\_lang\ X0)\ (k1\_zfmisc\_1\ (k9\_qc\_lang1\ X0))) \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0)\Rightarrow(\forall X1.(m1\_subset\_1\ X1\ (k1\_zfmisc\_1\ X0))\Rightarrow(v1\_xboole\_0\ X1)) \quad (8)$$

**Theorem 1**

$$\forall X0.(m1\_qc\_lang1\ X0)\Rightarrow(\forall X1.(\neg v1\_xboole\_0\ X1)\Rightarrow(\forall X2.(m2\_funct\_2\ X2\ (k3\_qc\_lang1\ X0)\ X1\ (k2\_valuat\_1\ X0\ X1))\Rightarrow(\forall X3.(m2\_subset\_1\ X3\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0))\Rightarrow(\forall X4.(m2\_subset\_1\ X4\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0))\Rightarrow(\forall X5.(m1\_valuat\_1\ X5\ X0\ X1)\Rightarrow(r1\_valuat\_1\ X0\ X1\ (k8\_cqc\_lang\ X0\ X3\ (k8\_cqc\_lang\ X0\ (k6\_cqc\_lang\ X0\ X3)\ X4))\ X5\ X2))))))$$