t13_valuat_1
(TMQ8Syc3zepLo8ecz2bykXx1usorCZibXZs)

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Let $m1\_qc\_lang1 : \iota \Rightarrow o$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ 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 $k9\_qc\_lang1 : \iota \Rightarrow \iota$ 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 $r2\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_valuat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_margrel1 : \iota$ be given. Let $k8\_valuat\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k11\_cqc\_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_valuat\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_cqc\_lang : \iota \Rightarrow \iota$ be given. Let $k1\_margrel1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_margrel1 : \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3\_card\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_qc\_lang1 : \iota \Rightarrow \iota$ be given. Let $k8\_qc\_lang1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_cqc\_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_valuat\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_valuat\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6\_cqc\_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k15\_margrel1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_cqc\_lang : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be

given. Let $k16\_margrel1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (\forall X1.(m2\_subset\_1\ X1\ (k9\_qc\_lang1$$
$$X0)\ (k3\_cqc\_lang\ X0)) \Rightarrow (\forall X2.(\neg v1\_xboole\_0\ X2) \Rightarrow (\forall X3.$$
$$(m1\_valuat\_1\ X3\ X0\ X2) \Rightarrow ((r2\_funct\_2\ (k2\_valuat\_1\ X0\ X2)\ k6\_margrel1$$
$$(k8\_valuat\_1\ X0\ X2\ X3\ (k5\_cqc\_lang\ X0))\ (k1\_margrel1\ k6\_margrel1$$
$$(k2\_valuat\_1\ X0\ X2)\ k8\_margrel1)) \wedge ((\forall X4.(m1\_subset\_1$$
$$X4\ k5\_numbers) \Rightarrow (\forall X5.((v5\_relat\_1\ X5\ (k3\_qc\_lang1\ X0)) \wedge$$
$$((v3\_card\_1\ X5\ X4) \wedge (m2\_finseq\_1\ X5\ (k2\_qc\_lang1\ X0)))) \Rightarrow (\forall X6.$$
$$(m2\_subset\_1\ X6\ (k6\_qc\_lang1\ X0)\ (k8\_qc\_lang1\ X0\ X4)) \Rightarrow (r2\_funct\_2$$
$$(k2\_valuat\_1\ X0\ X2)\ k6\_margrel1\ (k8\_valuat\_1\ X0\ X2\ X3\ (k4\_cqc\_lang$$
$$X4\ X0\ X6\ X5))\ (k5\_valuat\_1\ X0\ X2\ X4\ X5\ (k7\_valuat\_1\ X0\ X2\ X4\ X3\ X6)))))))) \wedge$$
$$((\forall X4.(m2\_subset\_1\ X4\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \Rightarrow$$
$$(r2\_funct\_2\ (k2\_valuat\_1\ X0\ X2)\ k6\_margrel1\ (k8\_valuat\_1\ X0\ X2$$
$$X3\ (k6\_cqc\_lang\ X0\ X4))\ (k15\_margrel1\ (k2\_valuat\_1\ X0\ X2)\ (k8\_valuat\_1$$
$$X0\ X2\ X3\ X4)))) \wedge ((\forall X4.(m2\_subset\_1\ X4\ (k9\_qc\_lang1\ X0)\ ($$
$$k3\_cqc\_lang\ X0)) \Rightarrow (r2\_funct\_2\ (k2\_valuat\_1\ X0\ X2)\ k6\_margrel1$$
$$(k8\_valuat\_1\ X0\ X2\ X3\ (k7\_cqc\_lang\ X0\ X1\ X4))\ (k16\_margrel1\ (k2\_valuat\_1$$
$$X0\ X2)\ (k8\_valuat\_1\ X0\ X2\ X3\ X1)\ (k8\_valuat\_1\ X0\ X2\ X3\ X4)))) \wedge (\forall X4.$$
$$(m2\_subset\_1\ X4\ (k2\_qc\_lang1\ X0)\ (k3\_qc\_lang1\ X0)) \Rightarrow (r2\_funct\_2$$
$$(k2\_valuat\_1\ X0\ X2)\ k6\_margrel1\ (k8\_valuat\_1\ X0\ X2\ X3\ (k11\_cqc\_lang$$
$$X0\ X4\ X1))\ (k3\_valuat\_1\ X0\ X2\ X4\ (k8\_valuat\_1\ X0\ X2\ X3\ X1)))))))))))$$
$$\tag{1}$$

Theorem 1

$$\forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (\forall X1.(\neg v1\_xboole\_0\ X1) \Rightarrow ($$
$$\forall X2.(m2\_subset\_1\ X2\ (k2\_qc\_lang1\ X0)\ (k3\_qc\_lang1\ X0)) \Rightarrow$$
$$(\forall X3.(m2\_subset\_1\ X3\ (k9\_qc\_lang1\ X0)\ (k3\_cqc\_lang\ X0)) \Rightarrow$$
$$(\forall X4.(m1\_valuat\_1\ X4\ X0\ X1) \Rightarrow (r2\_funct\_2\ (k2\_valuat\_1\ X0$$
$$X1)\ k6\_margrel1\ (k8\_valuat\_1\ X0\ X1\ X4\ (k11\_cqc\_lang\ X0\ X2\ X3))\ (k3\_valuat\_1$$
$$X0\ X1\ X2\ (k8\_valuat\_1\ X0\ X1\ X4\ X3)))))))$$