

## t20\_calcul\_1

(TMTasYvi7hynxME36Tzqzzij3x2JVeF55D8)

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Let  $m1\_qc\_lang1 : \iota \Rightarrow o$  be given. Let  $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k3\_cqc\_lang : \iota \Rightarrow \iota$  be given. Let  $r2\_relset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k1\_calcul\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $r10\_calcul\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k2\_calcul\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_cqc\_lang : \iota \Rightarrow \iota \Rightarrow \iota$  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  $m1\_valuat\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $r1\_valuat\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v1\_finseq\_1 : \iota \Rightarrow o$  be given. Let  $r9\_calcul\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(\neg v1\_xboole\_0 X1) \Rightarrow ( \\ & \forall X2.(m2\_funct\_2 X2 (k3\_qc\_lang1 X0) X1 (k2\_valuat\_1 X0 X1)) \Rightarrow \\ & (\forall X3.(m2\_subset\_1 X3 (k9\_qc\_lang1 X0) (k3\_cqc\_lang X0)) \Rightarrow \\ & (\forall X4.(m2\_subset\_1 X4 (k9\_qc\_lang1 X0) (k3\_cqc\_lang X0)) \Rightarrow \\ & (\forall X5.(m1\_valuat\_1 X5 X0 X1) \Rightarrow ((r1\_valuat\_1 X0 X1 (k7\_cqc\_lang \\ & X0 X3 X4) X5 X2) \Leftrightarrow ((r1\_valuat\_1 X0 X1 X3 X5 X2) \wedge (r1\_valuat\_1 X0 X1 X4 \\ & X5 X2))))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((m1\_subset\_1 X2 \\ & (k1\_zfmisc\_1 (k2\_zfmisc\_1 X0 X1))) \wedge (m1\_subset\_1 X3 (k1\_zfmisc\_1 \\ & (k2\_zfmisc\_1 X0 X1)))) \Rightarrow ((r2\_relset\_1 X0 X1 X2 X3) \Leftrightarrow (X2 = X3)) \end{aligned} \tag{2}$$

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.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0) \Leftrightarrow (m1\_finseq\_1 X1 X0) \tag{4}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\neg v1\_xboole\_0 (k3\_cqc\_lang X0)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1 X1 X0) \Rightarrow ((v1\_funct\_1 X1) \wedge (v1\_finseq\_1 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 (k2\_zfmisc\_1 k5\_numbers X0)))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_qc\_lang1 X0) \wedge ((m1\_subset\_1 X1 (k3\_cqc\_lang X0)) \wedge (m1\_subset\_1 X2 (k3\_cqc\_lang X0)))) \Rightarrow (m2\_subset\_1 (k7\_cqc\_lang X0 X1 X2) (k9\_qc\_lang1 X0) (k3\_cqc\_lang X0)) \quad (8)$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1 X0) \Rightarrow (m1\_subset\_1 (k3\_cqc\_lang X0) (k1\_zfmisc\_1 (k9\_qc\_lang1 X0))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((m1\_qc\_lang1 X0) \wedge (m1\_finseq\_1 X1 (k3\_cqc\_lang X0))) \Rightarrow (m2\_subset\_1 (k2\_calcul\_1 X0 X1) (k9\_qc\_lang1 X0) (k3\_cqc\_lang X0)) \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \wedge (m1\_finseq\_1 X1 X0)) \Rightarrow (m2\_finseq\_1 (k1\_calcul\_1 X0 X1) X0) \quad (11)$$

Assume the following.

$$\forall X0.(m1\_qc\_lang1 X0) \Rightarrow (\forall X1.(m2\_finseq\_1 X1 (k3\_cqc\_lang X0)) \Rightarrow (\forall X2.(m2\_subset\_1 X2 (k9\_qc\_lang1 X0) (k3\_cqc\_lang X0)) \Rightarrow ((r10\_calcul\_1 X0 X1 X2) \Leftrightarrow (\forall X3.(\neg v1\_xboole\_0 X3) \Rightarrow (\forall X4.(m1\_valuat\_1 X4 X0 X3) \Rightarrow (\forall X5.(m2\_funct\_2 X5 (k3\_qc\_lang1 X0) X3 (k2\_valuat\_1 X0 X3)) \Rightarrow ((r9\_calcul\_1 X0 X1 X3 X4 X5) \Rightarrow (r1\_valuat\_1 X0 X3 X2 X4 X5)))))))) \quad (12)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)) \Rightarrow (v1\_xboole\_0 X1)) \quad (13)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.(m1\_qc\_lang1\ X0) \Rightarrow (\forall X1.(m2\_finseq\_1\ X1\ (k3\_cqc\_lang\ X0)) \Rightarrow (\forall X2.(m2\_finseq\_1\ X2\ (k3\_cqc\_lang\ X0)) \Rightarrow (((r2\_reset\_1 \\ & k5\_numbers\ (k3\_cqc\_lang\ X0)\ (k1\_calcul\_1\ (k3\_cqc\_lang\ X0)\ X1) \\ & (k1\_calcul\_1\ (k3\_cqc\_lang\ X0)\ X2)) \wedge ((r10\_calcul\_1\ X0\ (k1\_calcul\_1 \\ & (k3\_cqc\_lang\ X0)\ X1)\ (k2\_calcul\_1\ X0\ X1)) \wedge (r10\_calcul\_1\ X0\ (k1\_calcul\_1 \\ & (k3\_cqc\_lang\ X0)\ X2)\ (k2\_calcul\_1\ X0\ X2)))))) \Rightarrow (r10\_calcul\_1\ X0\ ( \\ & k1\_calcul\_1\ (k3\_cqc\_lang\ X0)\ X1)\ (k7\_cqc\_lang\ X0\ (k2\_calcul\_1 \\ & X0\ X1)\ (k2\_calcul\_1\ X0\ X2)))))) \end{aligned}$$