l8_quaterni (TMP-BRokrNS9nYAVyUeFJUGbPHRD6FupUnrm)

October 27, 2020

Let $r2\_zfmisc\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k2\_quaterni : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.\forall X6.\forall X7.(r2\_zfmisc\_1\ X0\ X1\ X2\ X3) \Rightarrow ((k1\_funct\_1\ (k2\_quaterni\ X0\ X1\ X2\ X3\ X4\ X5\ X6\ X7)\ X0 = X4) \wedge ((k1\_funct\_1\ (k2\_quaterni\ X0\ X1\ X2\ X3\ X4\ X5\ X6\ X7)\ X1 = X5) \wedge ((k1\_funct\_1\ (k2\_quaterni\ X0\ X1\ X2\ X3\ X4\ X5\ X6\ X7)\ X2 = X6) \wedge (k1\_funct\_1\ (k2\_quaterni\ X0\ X1\ X2\ X3\ X4\ X5\ X6\ X7)\ X3 = X7)))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.\forall X6.\forall X7.k9\_xtuple\_0\ (k2\_quaterni\ X0\ X1\ X2\ X3\ X4\ X5\ X6\ X7) = k2\_enumset1\ X0\ X1\ X2\ X3 \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.\forall X6.\forall X7.(v1\_relat\_1\ (k2\_quaterni\ X0\ X1\ X2\ X3\ X4\ X5\ X6\ X7)) \wedge (v1\_funct\_1\ (k2\_quaterni\ X0\ X1\ X2\ X3\ X4\ X5\ X6\ X7)) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(r1\_tarski\ X0\ X1) \Leftrightarrow (\forall X2.(X2 \in X0) \Rightarrow (X2 \in X1)) \tag{4}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge (v1\_funct\_1\ X0)) \Rightarrow (\forall X1.(X1 = k10\_xtuple\_0\ X0) \Leftrightarrow (\forall X2.(X2 \in X1) \Leftrightarrow (\exists X3.(X3 \in k9\_xtuple\_0\ X0) \wedge (X2 = k1\_funct\_1\ X0\ X3)))) \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.(X4 = k2\_enumset1\ X0\ X1\ X2\ X3) \Leftrightarrow (\forall X5.(X5 \in X4) \Leftrightarrow (\neg(X5 \neq X0) \wedge ((X5 \neq X1) \wedge ((X5 \neq X2) \wedge (X5 \neq X3)))))) \tag{6}$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.\forall X3.\forall X4.\forall X5.\ \forall X6.\forall X7.(r2\_zfmisc\_1\ X0\ X1\ X2\ X3) \Rightarrow (r1\_tarski\ (k2\_enumset1\ X4\ X5\ X6\ X7)\ (k10\_xtuple\_0\ (k2\_quaterni\ X0\ X1\ X2\ X3\ X4\ X5\ X6\ X7)))$$