

t8_funct_9
(TMGcJPBsShh7VJvh1fg89yBzsPhZNgzTnZP)

October 27, 2020

Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $v1_funct_9 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_valued_0 : \iota \Rightarrow o$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 X0))) \wedge (v1_xcmplx_0 X1)) \Rightarrow ((v1_relat_1 (k7_valued_1 X0 X1)) \wedge (v1_funct_1 (k7_valued_1 X0 X1))) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_valued_0 X0))) \Rightarrow \\ & (\forall X1. (v1_xcmplx_0 X1) \Rightarrow (\forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((X2 = k7_valued_1 X0 X1) \Leftrightarrow ((k9_xtuple_0 X2 = k9_xtuple_0 X0) \wedge (\forall X3. (X3 \in k9_xtuple_0 X2) \Rightarrow (k1_funct_1 X2 X3 = k2_xcmplx_0 X1 (k1_funct_1 X0 X3))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_xreal_0 X0) \Rightarrow (\forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow ((v1_funct_9 X1 X0) \Leftrightarrow ((X0 \neq k6_numbers) \wedge (\forall X2. (v1_xreal_0 X2) \Rightarrow (((X2 \in k9_xtuple_0 X1) \Rightarrow (k2_xcmplx_0 X2 X0 \in k9_xtuple_0 X1)) \wedge (((k2_xcmplx_0 X2 X0 \in k9_xtuple_0 X1) \Rightarrow (X2 \in k9_xtuple_0 X1)) \wedge (X2 \in k9_xtuple_0 X1) \Rightarrow (k1_funct_1 X1 X2 = k1_funct_1 X1 (k2_xcmplx_0 X2 X0)))))))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v3_valued_0 X0)) \Rightarrow ((v1_relat_1 X0) \wedge (v1_valued_0 X0)) \quad (4)$$

Assume the following.

$$\forall X0. (v1_xreal_0 X0) \Rightarrow (v1_xcmplx_0 X0) \quad (5)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & ((v1_relat_1 X2) \wedge ((v1_funct_1 X2) \wedge (v3_valued_0 X2))) \Rightarrow ((v1_funct_9 \\ & X2 X0) \Rightarrow (v1_funct_9 (k7_valued_1 X2 X1) X0)))) \end{aligned}$$