

t30_card_2

(TMLEnApZzrudFCehzon2Xg1ZGdoQYh8e2fJ)

October 27, 2020

Let $v1_card.1 : \iota \Rightarrow o$ be given. Let $k3_card.2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_card.2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_wellord2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct.2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc.1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_card.1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (r2_wellord2 (k1_funct.2 (k2_zfmisc.1 \\ & X0 X1) X2) (k1_funct.2 X0 (k1_funct.2 X1 X2))) \wedge (k1_card.1 (k1_funct.2 \\ & (k2_zfmisc.1 X0 X1) X2) = k1_card.1 (k1_funct.2 X0 (k1_funct.2 X1 \\ & X2))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((r2_wellord2 X0 \\ & X1) \wedge (r2_wellord2 X2 X3)) \Rightarrow ((r2_wellord2 (k1_funct.2 X0 X2) (k1_funct.2 \\ & X1 X3)) \wedge (k1_card.1 (k1_funct.2 X0 X2) = k1_card.1 (k1_funct.2 X1 \\ & X3))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. r2_wellord2 X0 X0 \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (r2_wellord2 (k2_zfmisc.1 X0 X1) (k2_zfmisc.1 \\ & X1 X0)) \wedge (k1_card.1 (k2_zfmisc.1 X0 X1) = k1_card.1 (k2_zfmisc.1 \\ & X1 X0)) \end{aligned} \tag{4}$$

Assume the following.

$$\forall X0. v1_card.1 (k1_card.1 X0) \tag{5}$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_card.1 X0) \Rightarrow (\forall X1. (v1_card.1 X1) \Rightarrow (k3_card.2 \\ & X0 X1 = k1_card.1 (k1_funct.2 X1 X0))) \end{aligned} \tag{6}$$

Assume the following.

$$\forall X0.(v1_card_1 X0) \Rightarrow (\forall X1.(v1_card_1 X1) \Rightarrow (k2_card_2 X0 X1 = k1_card_1 (k2_zfmisc_1 X0 X1))) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.(v1_card_1 X1) \Rightarrow ((X1 = k1_card_1 X0) \Leftrightarrow (r2_wellord2 X0 X1)) \quad (8)$$

Theorem 1

$$\forall X0.(v1_card_1 X0) \Rightarrow (\forall X1.(v1_card_1 X1) \Rightarrow (\forall X2.(v1_card_1 X2) \Rightarrow (k3_card_2 X0 (k2_card_2 X1 X2) = k3_card_2 (k3_card_2 X0 X1) X2))))$$