

t15_card_2 (TMGSEe- JJJJM4Q8fDNHJPrKiL1QGheGsrAtZ)

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Let $r2_wellord2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1. \forall X2. \forall X3. \forall X4. \forall X5. \\
 & \quad \forall X6. \forall X7. ((r2_wellord2 X0 X1) \wedge (r2_wellord2 X2 X3)) \Rightarrow \\
 & \quad ((X4 = X5) \vee (X6 = X7) \vee ((r2_wellord2 (k2_xboole_0 (k2_zfmisc_1 \\
 & \quad X0 (k1_tarski X4)) (k2_zfmisc_1 X2 (k1_tarski X5))) (k2_xboole_0 \\
 & \quad (k2_zfmisc_1 X1 (k1_tarski X6)) (k2_zfmisc_1 X3 (k1_tarski X7)))))) \wedge \\
 & \quad (k1_card_1 (k2_xboole_0 (k2_zfmisc_1 X0 (k1_tarski X4)) (k2_zfmisc_1 \\
 & \quad X2 (k1_tarski X5))) = k1_card_1 (k2_xboole_0 (k2_zfmisc_1 X1 (k1_tarski \\
 & \quad X6)) (k2_zfmisc_1 X3 (k1_tarski X7))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0. \forall X1. r2_wellord2 X0 X0 \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. k2_xboole_0 X0 X1 = k2_xboole_0 X1 X0 \tag{3}$$

Theorem 1

$$\begin{aligned}
 & \forall X0. \forall X1. (r2_wellord2 (k2_xboole_0 (k2_zfmisc_1 \\
 & \quad X0 (k1_tarski k6_numbers)) (k2_zfmisc_1 X1 (k1_tarski np_1))) \\
 & \quad (k2_xboole_0 (k2_zfmisc_1 X1 (k1_tarski k6_numbers)) (k2_zfmisc_1 \\
 & \quad X0 (k1_tarski np_1)))) \wedge (k1_card_1 (k2_xboole_0 (k2_zfmisc_1 \\
 & \quad X0 (k1_tarski k6_numbers)) (k2_zfmisc_1 X1 (k1_tarski np_1))) = \\
 & \quad k1_card_1 (k2_xboole_0 (k2_zfmisc_1 X1 (k1_tarski k6_numbers)) \\
 & \quad (k2_zfmisc_1 X0 (k1_tarski np_1))))
 \end{aligned}$$