

t20\_card\_1 (TMbBwDKy-  
Cwfg6wWBZDKR3RkYfPTD3sR2FkX)

October 27, 2020

Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v4\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v1\_relat\_1 : \iota \Rightarrow o$  be given. Let  $v1\_funct\_1 : \iota \Rightarrow o$  be given. Let  $v5\_ordinal1 : \iota \Rightarrow o$  be given. Let  $k9\_xtuple\_0 : \iota \Rightarrow \iota$  be given. Let  $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k1\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal2 : \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $k1\_ordinal1 : \iota \Rightarrow \iota$  be given. Let  $k2\_card\_1 : \iota \Rightarrow \iota$  be given. Let  $k3\_tarski : \iota \Rightarrow \iota$  be given. Let  $k1\_tarski : \iota \Rightarrow \iota$  be given. Assume the following.

$$\begin{aligned}
 & (k3\_card\_1 \ k1\_xboole\_0 = k1\_card\_1 \ k4\_ordinal1) \wedge (\forall X0. \\
 & (v3\_ordinal1 \ X0) \Rightarrow (k3\_card\_1 \ (k1\_ordinal1 \ X0) = k2\_card\_1 \ (k3\_tarski \\
 & \ (k1\_tarski \ (k3\_card\_1 \ X0)))) \wedge (\forall X0. (v3\_ordinal1 \ X0) \Rightarrow \\
 & ((v4\_ordinal1 \ X0) \Rightarrow ((X0 = k1\_xboole\_0) \vee (\forall X1. ((v1\_relat\_1 \\
 & \ X1) \wedge ((v1\_funct\_1 \ X1) \wedge (v5\_ordinal1 \ X1)) \Rightarrow (((k9\_xtuple\_0 \ X1 = \\
 & \ X0) \wedge (\forall X2. (v3\_ordinal1 \ X2) \Rightarrow ((X2 \in X0) \Rightarrow (k1\_funct\_1 \ X1 \ X2 = \\
 & \ k3\_card\_1 \ X2)))) \Rightarrow (k3\_card\_1 \ X0 = k1\_card\_1 \ (k4\_ordinal2 \ X1)))))))))
 \end{aligned} \tag{1}$$

**Theorem 1**

$$\begin{aligned}
 & \forall X0. (v3\_ordinal1 \ X0) \Rightarrow ((v4\_ordinal1 \ X0) \Rightarrow ((X0 = k1\_xboole\_0) \vee \\
 & \ (\forall X1. ((v1\_relat\_1 \ X1) \wedge ((v1\_funct\_1 \ X1) \wedge (v5\_ordinal1 \\
 & \ X1)) \Rightarrow (((k9\_xtuple\_0 \ X1 = X0) \wedge (\forall X2. (v3\_ordinal1 \ X2) \Rightarrow ( \\
 & \ (X2 \in X0) \Rightarrow (k1\_funct\_1 \ X1 \ X2 = k3\_card\_1 \ X2)))) \Rightarrow (k3\_card\_1 \ X0 = k1\_card\_1 \\
 & \ (k4\_ordinal2 \ X1)))))))))
 \end{aligned}$$