t22_zfrefle1 (TMcEVgoZybrF8ba414w8nb5GwfXK67dVC4r)

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Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v5\_ordinal1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_ordinal2 : \iota \Rightarrow o$ be given. Let $v4\_ordinal1 : \iota \Rightarrow o$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $v2\_ordinal2 : \iota \Rightarrow o$ be given. Let $r1\_ordinal2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $r2\_ordinal2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_ordinal2 : \iota \Rightarrow \iota$ be given. Let $k8\_ordinal2 : \iota \Rightarrow \iota$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v5\_ordinal1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_ordinal2\ X0)))) \Rightarrow (((v4\_ordinal1\ (k9\_xtuple\_0\ X0)) \wedge (v2\_ordinal2\ X0)) \Rightarrow ((k9\_xtuple\_0\ X0 = k1\_xboole\_0) \vee ((r1\_ordinal2\ (k4\_ordinal2\ X0)\ X0) \wedge (k8\_ordinal2\ X0 = k4\_ordinal2\ X0)))) \tag{1}$$

Assume the following.

$$\forall X0.((v5\_ordinal1\ X0) \wedge ((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_ordinal2\ X0)))) \Rightarrow (r1\_tarski\ (k10\_xtuple\_0\ X0)\ (k4\_ordinal2\ X0)) \tag{2}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v5\_ordinal1\ X0))) \Rightarrow (v3\_ordinal1\ (k9\_xtuple\_0\ X0)) \tag{3}$$

Assume the following.

$$\forall X0.(v3\_ordinal1\ X0) \Rightarrow (\forall X1.(v3\_ordinal1\ X1) \Rightarrow ((r2\_ordinal2\ X0\ X1) \Leftrightarrow (\exists X2.((v5\_ordinal1\ X2) \wedge ((v1\_relat\_1\ X2) \wedge ((v1\_funct\_1\ X2) \wedge (v1\_ordinal2\ X2)))) \wedge ((k9\_xtuple\_0\ X2 = X1) \wedge ((r1\_tarski\ (k10\_xtuple\_0\ X2)\ X0) \wedge ((v2\_ordinal2\ X2) \wedge (X0 = k4\_ordinal2\ X2))))))) \tag{4}$$

Assume the following.

$$\forall X0.((v5\_ordinal1\ X0) \wedge ((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_ordinal2\ X0)))) \Rightarrow ((\exists X1.(v3\_ordinal1\ X1) \wedge (r1\_ordinal2\ X1\ X0)) \Rightarrow (\forall X1.(v3\_ordinal1\ X1) \Rightarrow ((X1 = k8\_ordinal2\ X0) \Leftrightarrow (r1\_ordinal2\ X1\ X0)))) \tag{5}$$

Theorem 1

$$\forall X0.(v3\_ordinal1\ X0)\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v5\_ordinal1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_ordinal2\ X1))))\Rightarrow(((v4\_ordinal1\ (k9\_xtuple\_0\ X1))\wedge((v2\_ordinal2\ X1)\wedge(r1\_ordinal2\ X0\ X1)))\Rightarrow((k9\_xtuple\_0\ X1 = k1\_xboole\_0)\vee(r2\_ordinal2\ X0\ (k9\_xtuple\_0\ X1)))))$$