l20_compos_1 (TMKwS6Mp9zkZvuVaR63NiNdX1fpZZ3bUv1J)

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Let $l1\_compos\_1 : \iota \Rightarrow o$ be given. Let $k7\_nat\_d : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_card\_1 : \iota \Rightarrow \iota$ be given. Let $k4\_compos\_1 : \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ 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 $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $k5\_afinsq\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_afinsq\_1 : \iota \Rightarrow \iota$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xreal\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_0 : \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k1\_card\_1 : \iota \Rightarrow \iota$ be given. Let $k3\_afinsq\_1 : \iota \Rightarrow \iota$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k2\_compos\_1 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0) \Rightarrow (X0 = k1\_xboole\_0) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge ((v5\_ordinal1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_finset\_1\ X1)))) \Rightarrow ((X1 = k5\_afinsq\_1\ X0) \Leftrightarrow ((k2\_afinsq\_1\ X1 = np\_\_1) \wedge (k10\_xtuple\_0\ X1 = k1\_tarski\ X0))) \tag{2}$$

Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0) \wedge (v1\_finset\_1\ X0)) \Rightarrow (k6\_xcmplx\_0\ (k5\_card\_1\ X0)\ np\_\_1 = k1\_xreal\_0\ (k5\_card\_1\ X0)\ np\_\_1) \tag{3}$$

Assume the following.

$$v1\_xboole\_0\ np\_\_0 \tag{4}$$

Assume the following.

$$k6\_xcmplx\_0\ np\_\_1\ np\_\_1 = np\_\_0 \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((v7\_ordinal1\ X0) \wedge (v7\_ordinal1\ X1)) \Rightarrow (k7\_nat\_d\ X0\ X1 = k1\_xreal\_0\ X0\ X1) \tag{6}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{7}$$

Assume the following.

$$\forall X0.(v1\_finset\_1\ X0) \Rightarrow (k5\_card\_1\ X0 = k1\_card\_1\ X0) \tag{8}$$

Assume the following.

$$\forall X0.k5\_afinsq\_1\ X0 = k3\_afinsq\_1\ X0 \tag{9}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v5\_ordinal1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finset\_1\ X0)))) \Rightarrow (k2\_afinsq\_1\ X0 = k9\_xtuple\_0\ X0) \tag{10}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v5\_ordinal1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finset\_1\ X0)))) \Rightarrow (k1\_card\_1\ X0 = k9\_xtuple\_0\ X0) \tag{11}$$

Assume the following.

$$\forall X0.(v5\_ordinal1\ (k3\_afinsq\_1\ X0)) \wedge (v1\_finset\_1\ (k3\_afinsq\_1\ X0)) \tag{12}$$

Assume the following.

$$\forall X0.\neg v1\_xboole\_0\ (k3\_afinsq\_1\ X0) \tag{13}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v5\_ordinal1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finset\_1\ X0)))) \Rightarrow (v7\_ordinal1\ (k9\_xtuple\_0\ X0)) \tag{14}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ (k5\_afinsq\_1\ X0)) \wedge (v1\_funct\_1\ (k5\_afinsq\_1\ X0)) \tag{15}$$

Assume the following.

$$\forall X0.(l1\_compos\_1\ X0) \Rightarrow (k4\_compos\_1\ X0 = k3\_afinsq\_1\ (k2\_compos\_1\ X0)) \tag{16}$$

Theorem 1

$$\forall X0.(l1\_compos\_1\ X0) \Rightarrow (k7\_nat\_d\ (k5\_card\_1\ (k4\_compos\_1\ X0))\ np\_\_1 = k6\_numbers)$$