t5_scmp_gcd (TMa-trC2YPWxUpWtLc68ZpxTh9BYPsEGcsKg)

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Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_compos\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_scmpds\_2 : \iota$ be given. Let $k5\_card\_1 : \iota \Rightarrow \iota$ be given. Let $k4\_scmpds\_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v4\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $v5\_relat\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $v1\_afinsq\_1 : \iota \Rightarrow o$ be given. Let $k2\_scmpds\_4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $l1\_compos\_1 : \iota \Rightarrow o$ be given. Let $k9\_compos\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_afinsq\_1 : \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $v5\_ordinal1 : \iota \Rightarrow o$ be given. Let $l1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $l1\_memstr\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1\_extpro\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k16\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7\_funcop\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_compos\_1\ k1\_scmpds\_2)) \Rightarrow (\forall X1.\ ((\neg v1\_xboole\_0\ X1) \wedge ((v1\_relat\_1\ X1) \wedge ((v4\_relat\_1\ X1\ k5\_numbers) \wedge ((v5\_relat\_1\ X1\ (u1\_compos\_1\ k1\_scmpds\_2)) \wedge ((v1\_funct\_1\ X1) \wedge ((v1\_finset\_1\ X1) \wedge (v1\_afinsq\_1\ X1)))))))) \Rightarrow (k5\_card\_1\ (k2\_scmpds\_4\ X0\ X1) = k2\_nat\_1\ (k5\_card\_1\ X1)\ np\_\_1)) \tag{1}$$

Assume the following.

$$\forall X0.(l1\_compos\_1\ X0) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_compos\_1\ X0)) \Rightarrow (k5\_card\_1\ (k9\_compos\_1\ X0\ X1) = np\_\_1)) \tag{2}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_compos\_1\ k1\_scmpds\_2)) \Rightarrow (\forall X1.\ (m1\_subset\_1\ X1\ (u1\_compos\_1\ k1\_scmpds\_2)) \Rightarrow (k4\_scmpds\_4\ X0\ X1 = k2\_scmpds\_4\ X0\ (k9\_compos\_1\ k1\_scmpds\_2\ X1))) \tag{3}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_1)\wedge(m2\_subset\_1\ np\_\_1\ k1\_numbers\ k5\_numbers))\wedge((m1\_subset\_1\ np\_\_1\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_1\ k1\_numbers)) \tag{4}$$

Assume the following.

$$k2\_xcmplx\_0\ np\_\_1\ np\_\_1 = np\_\_2 \tag{5}$$

Assume the following.

$$\forall X0.\forall X1.((l1\_compos\_1\ X0)\wedge(m1\_subset\_1\ X1\ (u1\_compos\_1\ X0)))\Rightarrow(k9\_compos\_1\ X0\ X1 = k3\_afinsq\_1\ X1) \tag{6}$$

Assume the following.

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

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{8}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k5\_numbers)\wedge(v7\_ordinal1\ X1))\Rightarrow(k2\_nat\_1\ X0\ X1 = k2\_xcmplx\_0\ X0\ X1) \tag{9}$$

Assume the following.

$$\forall X0.(v5\_ordinal1\ (k3\_afinsq\_1\ X0))\wedge(v1\_finset\_1\ (k3\_afinsq\_1\ X0)) \tag{10}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ (k3\_afinsq\_1\ X0))\wedge(v1\_funct\_1\ (k3\_afinsq\_1\ X0)) \tag{11}$$

Assume the following.

$$\forall X0.\neg v1\_xboole\_0\ (k3\_afinsq\_1\ X0) \tag{12}$$

Assume the following.

$$\forall X0.\forall X1.(l1\_extpro\_1\ X1\ X0)\Rightarrow((l1\_memstr\_0\ X1\ X0)\wedge(l1\_compos\_1\ X1)) \tag{13}$$

Assume the following.

$$\forall X0.\forall X1.((l1\_compos\_1\ X0)\wedge(m1\_subset\_1\ X1\ (u1\_compos\_1\ X0)))\Rightarrow((v1\_relat\_1\ (k9\_compos\_1\ X0\ X1))\wedge((v4\_relat\_1\ (k9\_compos\_1\ X0\ X1)\ k5\_numbers)\wedge((v5\_relat\_1\ (k9\_compos\_1\ X0\ X1)\ (u1\_compos\_1\ X0))\wedge((v1\_funct\_1\ (k9\_compos\_1\ X0\ X1))\wedge(v1\_finset\_1\ (k9\_compos\_1\ X0\ X1)))))) \tag{14}$$

Assume the following.

$$(v1\_extpro\_1\ k1\_scmpds\_2\ np\_\_2) \wedge (l1\_extpro\_1\ k1\_scmpds\_2\ np\_\_2) \tag{15}$$

Assume the following.

$$\forall X0.\forall X1.k16\_funcop\_1\ X0\ X1 = k7\_funcop\_1\ (k1\_tarski\ X0)\ X1 \tag{16}$$

Assume the following.

$$\forall X0.k3\_afinsq\_1\ X0 = k16\_funcop\_1\ k6\_numbers\ X0 \tag{17}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1) \Rightarrow (v7\_ordinal1\ X0) \tag{18}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v5\_ordinal1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finset\_1\ X0)))) \Rightarrow ((v1\_relat\_1\ X0) \wedge ((v5\_ordinal1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge ((v1\_finset\_1\ X0) \wedge (v1\_afinsq\_1\ X0))))) \tag{19}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_compos\_1\ k1\_scmpds\_2)) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_compos\_1\ k1\_scmpds\_2)) \Rightarrow (k5\_card\_1\ (k4\_scmpds\_4\ X0\ X1) = np\_\_2))$$