t23_absvalue (TMcpJ41CJUPfpA15RfHPBaX4jzGvsjbTG3m)

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Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_absvalue : \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k1\_real\_1 : \iota \Rightarrow \iota$ be given. Let $k18\_complex1 : \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $v1\_xcmplx\_0 : \iota \Rightarrow o$ be given. Let $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $np\_\_2 : \iota$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np\_\_0 : \iota$ be given. Let $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_xcmplx\_0 : \iota$ be given. Let $k4\_xcmplx\_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow ((r1\_xxreal\_0\ (k1\_real\_1\ (k18\_complex1\ X0))\ X0) \wedge (r1\_xxreal\_0\ X0\ (k18\_complex1\ X0))) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xreal\_0\ X1) \Rightarrow (\forall X2.(v1\_xreal\_0\ X2) \Rightarrow (\neg(r1\_xxreal\_0\ k6\_numbers\ X0) \wedge ((\neg r1\_xxreal\_0\ X2\ X1) \wedge (r1\_xxreal\_0\ (k2\_xcmplx\_0\ X0\ X2)\ X1))))) \tag{2}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xreal\_0\ X1) \Rightarrow (\forall X2.(v1\_xreal\_0\ X2) \Rightarrow (\neg(\neg r1\_xxreal\_0\ X0\ k6\_numbers) \wedge ((r1\_xxreal\_0\ X1\ X2) \wedge (r1\_xxreal\_0\ (k2\_xcmplx\_0\ X0\ X2)\ X1))))) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xreal\_0\ X1) \Rightarrow (\forall X2.(v1\_xreal\_0\ X2) \Rightarrow (((r1\_xxreal\_0\ k6\_numbers\ X0) \wedge (r1\_xxreal\_0\ X1\ X2)) \Rightarrow (r1\_xxreal\_0\ X1\ (k2\_xcmplx\_0\ X0\ X2)))))) \tag{4}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xreal\_0\ X1) \Rightarrow (\forall X2.(v1\_xreal\_0\ X2) \Rightarrow (((r1\_xxreal\_0\ X0\ k6\_numbers) \wedge (r1\_xxreal\_0\ X1\ X2)) \Rightarrow (r1\_xxreal\_0\ (k2\_xcmplx\_0\ X1\ X0)\ X2))))) \tag{5}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(\forall X1.(v1\_xreal\_0\ X1)\Rightarrow(\neg(r1\_xxreal\_0\ k6\_numbers\ X0)\wedge((\neg r1\_xxreal\_0\ X1\ k6\_numbers)\wedge(r1\_xxreal\_0\ (k2\_xcmplx\_0\ X0\ X1)\ k6\_numbers)))) \tag{6}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(\forall X1.(v1\_xreal\_0\ X1)\Rightarrow((r1\_xxreal\_0\ X0\ k6\_numbers)\Rightarrow(r1\_xxreal\_0\ (k2\_xcmplx\_0\ X0\ X1)\ X1))) \tag{7}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow((X0 = k6\_numbers)\Leftrightarrow(k18\_complex1\ X0 = k6\_numbers)) \tag{8}$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0\ X0)\Rightarrow(\forall X1.(v1\_xcmplx\_0\ X1)\Rightarrow(X0 = k6\_xcmplx\_0\ (k2\_xcmplx\_0\ X0\ X1)\ X1)) \tag{9}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(\neg(k1\_absvalue\ X0 = k1\_real\_1\ np\_\_1)\wedge(r1\_xxreal\_0\ k6\_numbers\ X0)) \tag{10}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(\neg(k1\_absvalue\ X0 = np\_\_1)\wedge(r1\_xxreal\_0\ X0\ k6\_numbers)) \tag{11}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_2)\wedge(m2\_subset\_1\ np\_\_2\ k1\_numbers\ k5\_numbers))\wedge((m1\_subset\_1\ np\_\_2\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_2\ k1\_numbers)) \tag{12}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_1)\wedge(m2\_subset\_1\ np\_\_1\ k1\_numbers\ k5\_numbers))\wedge((m1\_subset\_1\ np\_\_1\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_1\ k1\_numbers)) \tag{13}$$

Assume the following.

$$(m2\_subset\_1\ np\_\_0\ k1\_numbers\ k5\_numbers)\wedge((m1\_subset\_1\ np\_\_0\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_0\ k1\_numbers)) \tag{14}$$

Assume the following.

$$k3\_xcmplx\_0\ k1\_xcmplx\_0\ k1\_xcmplx\_0 = k4\_xcmplx\_0\ np\_\_1 \tag{15}$$

Assume the following.

$$k6\_xcmplx\_0\ np\_\_1\ np\_\_1 = np\_\_0 \tag{16}$$

Assume the following.

$$k2\_xcmplx\_0\ (k4\_xcmplx\_0\ np\_\_1)\ np\_\_1 = np\_\_0 \tag{17}$$

Assume the following.

$$k2\_xcmplx\_0\ np\_\_1\ (k4\_xcmplx\_0\ np\_\_1) = np\_\_0 \tag{18}$$

Assume the following.

$$k2\_xcmplx\_0\ np\_\_1\ np\_\_1 = np\_\_2 \tag{19}$$

Assume the following.

$$k2\_xcmplx\_0\ np\_\_1\ np\_\_0 = np\_\_1 \tag{20}$$

Assume the following.

$$k2\_xcmplx\_0\ np\_\_0\ np\_\_1 = np\_\_1 \tag{21}$$

Assume the following.

$$r1\_xxreal\_0\ (k4\_xcmplx\_0\ np\_\_1)\ np\_\_1 \tag{22}$$

Assume the following.

$$r1\_xxreal\_0\ np\_\_1\ np\_\_1 \tag{23}$$

Assume the following.

$$\neg r1\_xxreal\_0\ np\_\_1\ np\_\_0 \tag{24}$$

Assume the following.

$$r1\_xxreal\_0\ np\_\_0\ np\_\_1 \tag{25}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0\ X0)\wedge(m1\_subset\_1\ X1\ k1\_numbers))\Rightarrow (k5\_real\_1\ X0\ X1 = k6\_xcmplx\_0\ X0\ X1) \tag{26}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(k1\_real\_1\ X0 = k4\_xcmplx\_0\ X0) \tag{27}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(k1\_absvalue\ (k1\_absvalue\ X0) = k1\_absvalue\ X0) \tag{28}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(\forall X1.(v1\_xreal\_0\ X1)\Rightarrow(\forall X2.\ (v1\_xreal\_0\ X2)\Rightarrow((r1\_xxreal\_0\ X0\ (k2\_xcmplx\_0\ X1\ X2))\Rightarrow(r1\_xxreal\_0\ (k6\_xcmplx\_0\ X0\ X1)\ X2)))) \tag{29}$$

Assume the following.

$$k2\_xcmplx\_0\ np\_\_1\ (k4\_xcmplx\_0\ np\_\_1) = k6\_numbers \tag{30}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0\ X0)\wedge(v1\_xreal\_0\ X1))\Rightarrow(v1\_xreal\_0\ (k2\_xcmplx\_0\ X0\ X1)) \tag{31}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow((v1\_xcmplx\_0\ (k4\_xcmplx\_0\ X0))\wedge(v1\_xreal\_0\ (k4\_xcmplx\_0\ X0))) \tag{32}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xreal\_0\ (k1\_absvalue\ X0)) \tag{33}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(((\neg r1\_xxreal\_0\ X0\ k6\_numbers)\Rightarrow(k1\_absvalue\ X0 = np\_\_1))\wedge(((\neg r1\_xxreal\_0\ k6\_numbers\ X0)\Rightarrow(k1\_absvalue\ X0 = k1\_real\_1\ np\_\_1))\wedge(((r1\_xxreal\_0\ X0\ k6\_numbers)\wedge(r1\_xxreal\_0\ k6\_numbers\ X0))\Rightarrow(k1\_absvalue\ X0 = k6\_numbers)))) \tag{34}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(v1\_xreal\_0\ X0) \tag{35}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k1\_numbers)\Rightarrow(v1\_xcmplx\_0\ X0) \tag{36}$$

Theorem 1

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(\forall X1.(v1\_xreal\_0\ X1)\Rightarrow(r1\_xxreal\_0\ (k5\_real\_1\ (k2\_xcmplx\_0\ (k1\_absvalue\ X0)\ (k1\_absvalue\ X1))\ np\_\_1)\ (k1\_absvalue\ (k2\_xcmplx\_0\ X0\ X1))))$$