

t25_absvalue (TMGZRM- NxzqLXVE8awp3XGQH8dsgvHTKJuFQ)

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Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k1_absvalue : \iota \Rightarrow \iota$ be given. Let $k13_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k7_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 np_1 X0 = X0) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (k1_absvalue X0 = k1_absvalue (k13_complex1 np_1 X0)) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (k13_complex1 np_1 (k1_absvalue X0) = k1_absvalue (k13_complex1 np_1 X0)) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((X0 \neq k6_numbers) \Rightarrow (k3_xcmplx_0 (k1_absvalue X0) (k1_absvalue (k13_complex1 np_1 X0)) = np_1)) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (k1_absvalue (k3_xcmplx_0 X0 X1) = k3_xcmplx_0 (k1_absvalue X0) (k1_absvalue X1))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_xcmplx_0 X0) \wedge ((v1_xcmplx_0 X1) \wedge (v1_xcmplx_0 X2))) \Rightarrow (k3_xcmplx_0 X0 (k7_xcmplx_0 X1 X2) = k7_xcmplx_0 (k3_xcmplx_0 X0 X1) X2) \quad (6)$$

Assume the following.

$$k3_xcmplx_0 \ np_1 \ np_1 = np_1 \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 \ X0)\wedge(v1_xcmplx_0 \ X1))\Rightarrow(\quad (8)$$

$$k13_complex1 \ X0 \ X1 = k7_xcmplx_0 \ X0 \ X1)$$

Assume the following.

$$\exists X0.v1_xreal_0 \ X0 \quad (9)$$

Assume the following.

$$\forall X0.(v1_xreal_0 \ X0)\Rightarrow(k1_absvalue \ (k1_absvalue \ X0) = k1_absvalue \quad (10)$$

$$X0)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 \ X0)\wedge(v1_xreal_0 \ X1))\Rightarrow(v1_xreal_0 \quad (11)$$

$$(k7_xcmplx_0 \ X0 \ X1))$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 \ X0)\wedge(v1_xreal_0 \ X1))\Rightarrow(v1_xreal_0 \quad (12)$$

$$(k3_xcmplx_0 \ X0 \ X1))$$

Assume the following.

$$\forall X0.(v1_xreal_0 \ X0)\Rightarrow(v1_xreal_0 \ (k1_absvalue \ X0)) \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 \ X0)\wedge(v1_xcmplx_0 \ X1))\Rightarrow(\quad (14)$$

$$k3_xcmplx_0 \ X0 \ X1 = k3_xcmplx_0 \ X1 \ X0)$$

Assume the following.

$$\forall X0.(v1_xreal_0 \ X0)\Rightarrow(v1_xcmplx_0 \ X0) \quad (15)$$

Theorem 1

$$\forall X0.(v1_xreal_0 \ X0)\Rightarrow(\forall X1.(v1_xreal_0 \ X1)\Rightarrow(k1_absvalue \quad (16)$$

$$(k13_complex1 \ X0 \ X1) = k13_complex1 \ (k1_absvalue \ X0) \ (k1_absvalue \ X1)))$$