

## t26\_absvalue

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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  $k6\_numbers : \iota$  be given. Let  $k3\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k18\_complex1 : \iota \Rightarrow \iota$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_real\_1 : \iota \Rightarrow \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  be given. Let  $np\_0 : \iota$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k1\_numbers : \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k16\_complex1 : \iota \Rightarrow \iota$  be given. Let  $c5\_xreal\_0 : \iota$  be given. Let  $k1\_arytm\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $c3\_xreal\_0 : \iota$  be given. Let  $v3\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $c7\_xreal\_0 : \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xxreal\_0 : \iota$  be given. Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 (k4\_xcmplx\_0 X0) X1) \Rightarrow (r1\_xxreal\_0 k6\_numbers (k2\_xcmplx\_0 X0 X1)))) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (((r1\_xxreal\_0 (k4\_xcmplx\_0 X0) X1) \wedge (r1\_xxreal\_0 X1 X0)) \Leftrightarrow (r1\_xxreal\_0 (k18\_complex1 X1) X0))) \quad (2)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow ((r1\_xxreal\_0 (k1\_real\_1 (k18\_complex1 X0)) X0) \wedge (r1\_xxreal\_0 X0 (k18\_complex1 X0))) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.(X0 \in X1) \Rightarrow (m1\_subset\_1 X0 X1) \quad (4)$$

Assume the following.

$$k2\_xcmplx\_0 np\_1 (k4\_xcmplx\_0 np\_1) = np\_0 \quad (5)$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0)\wedge(m1\_subset\_1 X1 k1\_numbers))\Rightarrow (k3\_xreal\_1 X0 X1 = k2\_xcmplx\_0 X0 X1) \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0)\Rightarrow(k18\_complex1 X0 = k16\_complex1 X0) \quad (8)$$

Assume the following.

$$(c5\_xreal\_0 = k4\_xcmplx\_0 np\_1)\wedge(k1\_arytm\_0 c3\_xreal\_0 c5\_xreal\_0 = k6\_numbers) \quad (9)$$

Assume the following.

$$k2\_xcmplx\_0 np\_1 (k4\_xcmplx\_0 np\_1) = k6\_numbers \quad (10)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0)\Rightarrow((v1\_xreal\_0 (k16\_complex1 X0))\wedge (\neg v3\_xxreal\_0 (k16\_complex1 X0))) \quad (11)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0)\Rightarrow(v1\_xreal\_0 (k16\_complex1 X0)) \quad (12)$$

Assume the following.

$$c7\_xreal\_0 = k6\_numbers \quad (13)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0)\Rightarrow((v3\_xxreal\_0 X0)\Leftrightarrow(\neg r1\_xxreal\_0 k6\_numbers X0)) \quad (14)$$

Assume the following.

$$k1\_xxreal\_0 = k1\_numbers \quad (15)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0)\Leftrightarrow(X0 \in k1\_numbers) \quad (16)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0)\Rightarrow(((r1\_xxreal\_0 k6\_numbers X0)\Rightarrow(k16\_complex1 X0 = X0))\wedge((\neg r1\_xxreal\_0 k6\_numbers X0)\Rightarrow(k16\_complex1 X0 = k4\_xcmplx\_0 X0))) \quad (17)$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xreal\_0 X0) \wedge (m1\_subset\_1 X1 k1\_numbers)) \Rightarrow (k3\_real\_1 X0 X1 = k3\_real\_1 X1 X0) \quad (18)$$

Assume the following.

$$\forall X0. (v1\_xreal\_0 X0) \Rightarrow (v1\_xxreal\_0 X0) \quad (19)$$

Assume the following.

$$\forall X0. (v1\_xreal\_0 X0) \Rightarrow (v1\_xcmplx\_0 X0) \quad (20)$$

**Theorem 1**

$$\forall X0. (v1\_xreal\_0 X0) \Rightarrow (r1\_xxreal\_0 k6\_numbers (k3\_real\_1 X0 (k18\_complex1 X0)))$$