

# l10\_taylor\_1 (TMazkhGbgZHcAAQYcZCNx- UQgiXRvJTnGiQ2)

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Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_rat\_1 : \iota \Rightarrow o$  be given. Let  $k9\_prepower : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k25\_sin\_cos : \iota \Rightarrow \iota$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Let  $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k5\_numbers : \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k6\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k13\_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_zfmisc\_1 : \iota \Rightarrow \iota$  be given. Let  $k7\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_ordinal1 : \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $v3\_ordinal1 : \iota \Rightarrow o$  be given. Let  $v6\_membered : \iota \Rightarrow o$  be given. Let  $v7\_ordinal1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_rat\_1 X0) \Rightarrow (\exists X1.(v1\_int\_1 X1) \wedge (\exists X2.(m2\_subset\_1 X2 k1\_numbers k5\_numbers) \wedge ((X2 \neq k6\_numbers) \wedge (X0 = k6\_real\_1 X1 X2)))) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_int\_1 X1) \Rightarrow (\forall X2.(v1\_int\_1 X2) \Rightarrow (k9\_prepower (k25\_sin\_cos X0) (k13\_complex1 X1 X2) = k25\_sin\_cos (k3\_xcmplx\_0 (k13\_complex1 X1 X2) X0)))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0) \wedge ((\neg v1\_xboole\_0 X1) \wedge (m1\_subset\_1 X1 (k1\_zfmisc\_1 X0)))) \Rightarrow (\forall X2.(m2\_subset\_1 X2 X0 X1) \Leftrightarrow (m1\_subset\_1 X2 X1)) \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0) \wedge (m1\_subset\_1 X1 k1\_numbers)) \Rightarrow (k6\_real\_1 X0 X1 = k7\_xcmplx\_0 X0 X1) \quad (4)$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0 X0)\wedge(v1\_xcmplx\_0 X1))\Rightarrow(k13\_complex1 X0 X1 = k7\_xcmplx\_0 X0 X1) \quad (6)$$

Assume the following.

$$(\neg v1\_xboole\_0 k4\_ordinal1)\wedge(v3\_ordinal1 k4\_ordinal1) \quad (7)$$

Assume the following.

$$v6\_membered k4\_ordinal1 \quad (8)$$

Assume the following.

$$\neg v1\_xboole\_0 k1\_numbers \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1\_xboole\_0 X0)\wedge((\neg v1\_xboole\_0 X1)\wedge(m1\_subset\_1 X1 (k1\_zfmisc\_1 X0))))\Rightarrow(\forall X2.(m2\_subset\_1 X2 X0 X1)\Rightarrow(m1\_subset\_1 X2 X0)) \quad (10)$$

Assume the following.

$$m1\_subset\_1 k5\_numbers (k1\_zfmisc\_1 k1\_numbers) \quad (11)$$

Assume the following.

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

Assume the following.

$$\forall X0.(v1\_int\_1 X0)\Rightarrow(v1\_xreal\_0 X0) \quad (13)$$

Assume the following.

$$\forall X0.(v7\_ordinal1 X0)\Rightarrow(v1\_int\_1 X0) \quad (14)$$

Assume the following.

$$\forall X0.(v6\_membered X0)\Rightarrow(\forall X1.(m1\_subset\_1 X1 X0)\Rightarrow(v7\_ordinal1 X1)) \quad (15)$$

**Theorem 1**

$$\forall X0.(v1\_xreal\_0 X0)\Rightarrow(\forall X1.(v1\_rat\_1 X1)\Rightarrow(k9\_prepower (k25\_sin\_cos X0) X1 = k25\_sin\_cos (k3\_xcmplx\_0 X1 X0)))$$