

t5\_polynom5 (TM-  
Sum8Pe5HsEhibVwTAW1Mo9gD9pKh78dgU)

October 27, 2020

Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k1\_numbers : \iota$  be given. Let  $k4\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_complfld : \iota$  be given. Let  $k1\_hahnban1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_real\_1 : \iota \Rightarrow \iota$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k1\_binop\_2 : \iota \Rightarrow \iota$  be given. Let  $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $k1\_xcmplx\_0 : \iota$  be given. Let  $k7\_complex1 : \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 k1\_complfld)) \Rightarrow (\forall X1. \\ & (v1\_xcmplx\_0 X1) \Rightarrow ((X0 = X1) \Rightarrow (k4\_algstr\_0 k1\_complfld X0 = k1\_binop\_2 \\ & X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_xcmplx\_0 X0) \wedge (v1\_xcmplx\_0 X1)) \Rightarrow ( \\ & k2\_xcmplx\_0 (k4\_xcmplx\_0 X0) (k4\_xcmplx\_0 X1) = k4\_xcmplx\_0 (k2\_xcmplx\_0 \\ & X0 X1)) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1\_xcmplx\_0 X0) \wedge ((v1\_xcmplx\_0 \\ & X1) \wedge (v1\_xcmplx\_0 X2))) \Rightarrow (k3\_xcmplx\_0 (k3\_xcmplx\_0 X0 X1) X2 = k3\_xcmplx\_0 \\ & X0 (k3\_xcmplx\_0 X1 X2)) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k3\_xcmplx\_0 X0 (k4\_xcmplx\_0 np\_1) = k4\_xcmplx\_0 X0) \tag{4}$$

Assume the following.

$$k3\_xcmplx\_0 k1\_xcmplx\_0 k1\_xcmplx\_0 = k4\_xcmplx\_0 np\_1 \tag{5}$$

Assume the following.

$$k7\_complex1 = k1\_xcmplx\_0 \quad (6)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (k1\_real\_1 X0 = k4\_xcmplx\_0 X0) \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k1\_binop\_2 X0 = k4\_xcmplx\_0 X0) \quad (8)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow ((v1\_xcmplx\_0 (k4\_xcmplx\_0 X0)) \wedge (v1\_xreal\_0 (k4\_xcmplx\_0 X0))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0 X0) \wedge (v1\_xcmplx\_0 X1)) \Rightarrow (v1\_xcmplx\_0 (k3\_xcmplx\_0 X0 X1)) \quad (10)$$

Assume the following.

$$v1\_xcmplx\_0 k1\_xcmplx\_0 \quad (11)$$

Assume the following.

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (v1\_xcmplx\_0 (k4\_xcmplx\_0 X0)) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xreal\_0 X0) \wedge (v1\_xreal\_0 X1)) \Rightarrow (m1\_subset\_1 (k1\_hahnban1 X0 X1) (u1\_struct\_0 k1\_complfld)) \quad (13)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (k1\_hahnban1 X0 X1 = k2\_xcmplx\_0 X0 (k3\_xcmplx\_0 X1 k7\_complex1))) \quad (14)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xcmplx\_0 X0) \wedge (v1\_xcmplx\_0 X1)) \Rightarrow (k3\_xcmplx\_0 X0 X1 = k3\_xcmplx\_0 X1 X0) \quad (15)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (v1\_xreal\_0 X0) \quad (16)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (v1\_xcmplx\_0 X0) \quad (17)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 (u1\_struct\_0 k1\_complfld)) \Rightarrow (v1\_xcmplx\_0 X0) \quad (18)$$

**Theorem 1**

$$\forall X0.(m1\_subset\_1 X0 k1\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1 X1 k1\_numbers) \Rightarrow (k4\_algstr\_0 k1\_complfld (k1\_hahnban1 X0 X1) = k1\_hahnban1 (k1\_real\_1 X0) (k1\_real\_1 X1)))$$