

# l20\_polynom8

(TMZqsjeffB1uSx4AjZh3gPVMcRz5caKCWXy)

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Let  $v2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v6\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v33\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v3\_group\_1 : \iota \Rightarrow o$  be given. Let  $v5\_group\_1 : \iota \Rightarrow o$  be given. Let  $v4\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $v5\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $l6\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $v1\_int\_1 : \iota \Rightarrow o$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $u1\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k3\_polynom8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k11\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_int\_2 : \iota \Rightarrow \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v3\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $k5\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $np\_0 : \iota$  be given. Let  $l3\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $k8\_group\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k16\_complex1 : \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $l4\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $k1\_group\_1 : \iota \Rightarrow \iota$  be given. Let  $l4\_struct\_0 : \iota \Rightarrow o$  be given. Let  $v9\_struct\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $l2\_struct\_0 : \iota \Rightarrow o$  be given. Let  $k4\_struct\_0 : \iota \Rightarrow \iota$  be given. Let  $l2\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l5\_algstr\_0 : \iota \Rightarrow o$  be given. Let  $l3\_struct\_0 : \iota \Rightarrow o$  be given. Let  $k5\_numbers : \iota$  be given. Let  $v6\_vectsp\_1 : \iota \Rightarrow o$  be given. Let  $k4\_xcmplx\_0 : \iota \Rightarrow \iota$  be given. Let  $v3\_vectsp\_1 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 X0 X1) \Rightarrow ((v1\_xboole\_0 X0) \vee ((v2\_xxreal\_0 X1) \vee (v3\_xxreal\_0 X0)))))) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (2)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v33\_algstr\_0 X0) \wedge ((v3\_group\_1 X0) \wedge ((v5\_group\_1 X0) \wedge ((v4\_vectsp\_1 X0) \wedge ((v5\_vectsp\_1 X0) \wedge (l6\_algstr\_0 X0))))))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (k3\_polynom8 X0 X1 k6\_numbers = k5\_struct\_0 X0)) \quad (3)$$

Assume the following.

$$v1\_xboole\_0 \text{ np\_}0 \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. (((\neg v2\_struct\_0 X0) \wedge (v5\_group\_1 \\ X0) \wedge (l3\_algstr\_0 X0)) \wedge ((m1\_subset\_1 X1 (u1\_struct\_0 X0)) \wedge \\ m1\_subset\_1 X2 (u1\_struct\_0 X0))) \Rightarrow (k8\_group\_1 X0 X1 X2 = k6\_algstr\_0 \\ X0 X1 X2) \end{aligned} \quad (5)$$

Assume the following.

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

Assume the following.

$$\forall X0. (v1\_int\_1 X0) \Rightarrow (k1\_int\_2 X0 = k16\_complex1 X0) \quad (7)$$

Assume the following.

$$\exists X0. (v1\_xboole\_0 X0) \wedge ((v1\_xcmplx\_0 X0) \wedge ((v1\_xxreal\_0 \\ X0) \wedge (v1\_xreal\_0 X0))) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0. (((\neg v2\_struct\_0 X0) \wedge ((v33\_algstr\_0 X0) \wedge ((v3\_group\_1 \\ X0) \wedge ((v5\_group\_1 X0) \wedge ((v4\_vectsp\_1 X0) \wedge ((v5\_vectsp\_1 X0) \wedge \\ l6\_algstr\_0 X0)))))) \Rightarrow (\forall X1. (m1\_subset\_1 X1 (u1\_struct\_0 \\ X0)) \Rightarrow (\forall X2. (v1\_int\_1 X2) \Rightarrow ((\neg r1\_xxreal\_0 k6\_numbers X2) \Rightarrow \\ (k3\_polynom8 X0 X1 X2 = k11\_algstr\_0 X0 (k3\_polynom8 X0 X1 (k1\_int\_2 \\ X2)))))) \end{aligned} \quad (9)$$

Assume the following.

$$\forall X0. (((\neg v2\_struct\_0 X0) \wedge ((v4\_vectsp\_1 X0) \wedge (l4\_algstr\_0 \\ X0))) \Rightarrow (k1\_group\_1 X0 = k5\_struct\_0 X0) \quad (10)$$

Assume the following.

$$\forall X0. (((\neg v6\_struct\_0 X0) \wedge (l4\_struct\_0 X0)) \Rightarrow (\neg v9\_struct\_0 \\ (k5\_struct\_0 X0) X0) \quad (11)$$

Assume the following.

$$\forall X0. (l2\_struct\_0 X0) \Rightarrow (v9\_struct\_0 (k4\_struct\_0 X0) X0) \quad (12)$$

Assume the following.

$$\forall X0. (l6\_algstr\_0 X0) \Rightarrow ((l2\_algstr\_0 X0) \wedge (l5\_algstr\_0 X0)) \quad (13)$$

Assume the following.

$$\forall X0.(l5\_algstr\_0 X0) \Rightarrow ((l4\_algstr\_0 X0) \wedge (l4\_struct\_0 X0)) \quad (14)$$

Assume the following.

$$\forall X0.(l4\_struct\_0 X0) \Rightarrow ((l2\_struct\_0 X0) \wedge (l3\_struct\_0 X0)) \quad (15)$$

Assume the following.

$$\forall X0.(l4\_algstr\_0 X0) \Rightarrow ((l3\_struct\_0 X0) \wedge (l3\_algstr\_0 X0)) \quad (16)$$

Assume the following.

$$\forall X0.(v1\_int\_1 X0) \Rightarrow (m1\_subset\_1 (k1\_int\_2 X0) k5\_numbers) \quad (17)$$

Assume the following.

$$\forall X0.(l3\_algstr\_0 X0) \Rightarrow (m1\_subset\_1 (k1\_group\_1 X0) (u1\_struct\_0 X0)) \quad (18)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge (l4\_algstr\_0 X0)) \Rightarrow ((v6\_vectsp\_1 X0) \Leftrightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow (k6\_algstr\_0 X0 (k5\_struct\_0 X0) X1 = X1))) \quad (19)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (((r1\_xxreal\_0 k6\_numbers X0) \Rightarrow (k16\_complex1 X0 = X0)) \wedge ((\neg r1\_xxreal\_0 k6\_numbers X0) \Rightarrow (k16\_complex1 X0 = k4\_xcmplx\_0 X0))) \quad (20)$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0 X0) \wedge ((v33\_algstr\_0 X0) \wedge ((v3\_group\_1 X0) \wedge ((v5\_group\_1 X0) \wedge ((v4\_vectsp\_1 X0) \wedge (l6\_algstr\_0 X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1 X1 (u1\_struct\_0 X0)) \Rightarrow ((X1 \neq k4\_struct\_0 X0) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow ((X2 = k11\_algstr\_0 X0 X1) \Leftrightarrow (k8\_group\_1 X0 X2 X1 = k5\_struct\_0 X0)))))) \quad (21)$$

Assume the following.

$$\forall X0.((v1\_xreal\_0 X0) \wedge (v2\_xreal\_0 X0)) \Rightarrow ((\neg v1\_xboole\_0 X0) \wedge ((v1\_xreal\_0 X0) \wedge (\neg v3\_xxreal\_0 X0))) \quad (22)$$

Assume the following.

$$\forall X0.(l4\_algstr\_0 X0) \Rightarrow (((\neg v2\_struct\_0 X0) \wedge (v4\_vectsp\_1 X0)) \Rightarrow ((\neg v2\_struct\_0 X0) \wedge ((v3\_vectsp\_1 X0) \wedge (v6\_vectsp\_1 X0)))) \quad (23)$$

Assume the following.

$$\forall X0.(v1\_int\_1 X0) \Rightarrow (v1\_xreal\_0 X0) \quad (24)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k5\_numbers) \Rightarrow (\neg v3\_xxreal\_0 X0) \quad (25)$$

**Theorem 1**

$$\begin{aligned} & \forall X0.((\neg v2\_struct\_0 X0) \wedge ((\neg v6\_struct\_0 X0) \wedge ((v33\_algstr\_0 \\ & X0) \wedge ((v3\_group\_1 X0) \wedge ((v5\_group\_1 X0) \wedge ((v4\_vectsp\_1 X0) \wedge (( \\ & v5\_vectsp\_1 X0) \wedge (l6\_algstr\_0 X0))))))) \Rightarrow (\forall X1.(v1\_int\_1 \\ & X1) \Rightarrow (\forall X2.(m1\_subset\_1 X2 (u1\_struct\_0 X0)) \Rightarrow ((r1\_xxreal\_0 \\ & X1 k6\_numbers) \Rightarrow (k3\_polynom8 X0 X2 X1 = k11\_algstr\_0 X0 (k3\_polynom8 \\ & X0 X2 (k1\_int\_2 X1)))))) \end{aligned}$$