

# t16\_euclid\_8 (TMKxmHwPG- bZZ2TiqKmj8KFB4dFdnZ7AtSzP)

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Let  $k5\_euclid\_8 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_euclid\_8 : \iota$  be given. Let  $k3\_euclid\_8 : \iota$  be given. Let  $k4\_euclid\_8 : \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $np\_1 : \iota$  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  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $np\_0 : \iota$  be given. Let  $k3\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k6\_numbers : \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k11\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k1\_euclid\_8 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v3\_membered : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \quad (1)$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & (m2\_subset\_1 np\_0 k1\_numbers k5\_numbers) \wedge ((m1\_subset\_1 np\_0 \\ & k5\_numbers) \wedge (m1\_subset\_1 np\_0 k1\_numbers)) \end{aligned} \quad (3)$$

Assume the following.

$$v1\_xboole\_0 np\_0 \quad (4)$$

Assume the following.

$$k3\_xcmplx\_0 np\_1 np\_1 = np\_1 \quad (5)$$

Assume the following.

$$k3\_xcmplx\_0 np\_1 np\_0 = np\_0 \quad (6)$$

Assume the following.

$$k3\_xcmplx\_0 np\_0 np\_1 = np\_0 \quad (7)$$

Assume the following.

$$k3\_xcmplx\_0 \ np\_0 \ np\_0 = np\_0 \tag{8}$$

Assume the following.

$$k6\_xcmplx\_0 \ np\_1 \ np\_0 = np\_1 \tag{9}$$

Assume the following.

$$k6\_xcmplx\_0 \ np\_0 \ np\_0 = np\_0 \tag{10}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{11}$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xreal\_0 \ X0) \wedge (v1\_xreal\_0 \ X1)) \Rightarrow (k11\_binop\_2 \ X0 \ X1 = k3\_xcmplx\_0 \ X0 \ X1) \tag{12}$$

Assume the following.

$$\forall X0. \forall X1. ((v1\_xreal\_0 \ X0) \wedge (v1\_xreal\_0 \ X1)) \Rightarrow (k10\_binop\_2 \ X0 \ X1 = k6\_xcmplx\_0 \ X0 \ X1) \tag{13}$$

Assume the following.

$$\begin{aligned} & \forall X0. (m1\_subset\_1 \ X0 \ k1\_numbers) \Rightarrow (\forall X1. (m1\_subset\_1 \\ & \quad X1 \ k1\_numbers) \Rightarrow (\forall X2. (m1\_subset\_1 \ X2 \ k1\_numbers) \Rightarrow (\forall X3. \\ & \quad (m1\_subset\_1 \ X3 \ k1\_numbers) \Rightarrow (\forall X4. (m1\_subset\_1 \ X4 \ k1\_numbers) \Rightarrow \\ & \quad (\forall X5. (m1\_subset\_1 \ X5 \ k1\_numbers) \Rightarrow (k5\_euclid\_8 \ (k1\_euclid\_8 \\ & \quad X0 \ X1 \ X2) \ (k1\_euclid\_8 \ X3 \ X4 \ X5) = k1\_euclid\_8 \ (k10\_binop\_2 \ (k11\_binop\_2 \\ & \quad X1 \ X5) \ (k11\_binop\_2 \ X2 \ X4)) \ (k10\_binop\_2 \ (k11\_binop\_2 \ X2 \ X3) \ (k11\_binop\_2 \\ & \quad X0 \ X5)) \ (k10\_binop\_2 \ (k11\_binop\_2 \ X0 \ X4) \ (k11\_binop\_2 \ X1 \ X3))))))))) \end{aligned} \tag{14}$$

Assume the following.

$$v3\_membered \ k1\_numbers \tag{15}$$

Assume the following.

$$k4\_euclid\_8 = k1\_euclid\_8 \ k6\_numbers \ k6\_numbers \ np\_1 \tag{16}$$

Assume the following.

$$k3\_euclid\_8 = k1\_euclid\_8 \ k6\_numbers \ np\_1 \ k6\_numbers \tag{17}$$

Assume the following.

$$k2\_euclid\_8 = k1\_euclid\_8 \ np\_1 \ k6\_numbers \ k6\_numbers \tag{18}$$

Assume the following.

$$\forall X0. (v3\_membered \ X0) \Rightarrow (\forall X1. (m1\_subset\_1 \ X1 \ X0) \Rightarrow (v1\_xreal\_0 \ X1)) \tag{19}$$

**Theorem 1**  $k5\_euclid\_8 \ k2\_euclid\_8 \ k3\_euclid\_8 = k4\_euclid\_8.$