

# t54\_power (TMUFwdbyPGt- paWqFT4yJ2yvLaxjqQx2NDZz)

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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  $np\_1 : \iota$  be given. Let  $k6\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k5\_power : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k13\_complex1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_power : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xreal\_0 X2) \Rightarrow ((\neg r1\_xxreal\_0 X0 k6\_numbers) \Rightarrow (k3\_power X0 ( \\ & k6\_xcmplx\_0 X1 X2) = k13\_complex1 (k3\_power X0 X1) (k3\_power X0 X2)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\neg(\neg \\ & r1\_xxreal\_0 X0 k6\_numbers) \wedge ((\neg r1\_xxreal\_0 X1 k6\_numbers) \wedge (r1\_xxreal\_0 \\ & (k7\_xcmplx\_0 X0 X1) k6\_numbers)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_xcmplx\_0 X0) \wedge (v1\_xcmplx\_0 X1)) \Rightarrow ( \\ & k13\_complex1 X0 X1 = k7\_xcmplx\_0 X0 X1) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_xreal\_0 X0) \wedge (v1\_xreal\_0 X1)) \Rightarrow (v1\_xreal\_0 \\ & (k6\_xcmplx\_0 X0 X1)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_xreal\_0 X0) \wedge (v1\_xreal\_0 X1)) \Rightarrow (v1\_xreal\_0 \\ & (k5\_power X0 X1)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1\_xreal\_0 X0) \wedge (v1\_xreal\_0 X1)) \Rightarrow (v1\_xreal\_0 \\ & (k3\_power X0 X1)) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\neg(\neg \\ r1\_xxreal\_0 X0 k6\_numbers) \wedge ((X0 \neq np\_1) \wedge (\neg r1\_xxreal\_0 X1 k6\_numbers) \wedge \\ (\neg \forall X2.(v1\_xreal\_0 X2) \Rightarrow ((X2 = k5\_power X0 X1) \Leftrightarrow (k3\_power \\ X0 X2 = X1)))))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xcmplx\_0 X0) \quad (8)$$

**Theorem 1**

$$\begin{aligned} \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2. \\ (v1\_xreal\_0 X2) \Rightarrow (\neg(\neg r1\_xxreal\_0 X0 k6\_numbers) \wedge ((X0 \neq np\_1) \wedge \\ ((\neg r1\_xxreal\_0 X1 k6\_numbers) \wedge (\neg r1\_xxreal\_0 X2 k6\_numbers) \wedge \\ (k6\_xcmplx\_0 (k5\_power X0 X1) (k5\_power X0 X2) \neq k5\_power X0 (k13\_complex1 \\ X1 X2)))))))))) \end{aligned}$$