

## t1\_rfunct\_4

(TMQt9Ra3d1b7tZBAb8wGBNrWxHTSGX45Krh)

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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  $k3\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k4\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow (r1\_xxreal\_0 X0 (k4\_xxreal\_0 X0 X1))) \quad (1)$$

Assume the following.

$$\forall X0.(v1\_xxreal\_0 X0) \Rightarrow (\forall X1.(v1\_xxreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 X0 X1) \Rightarrow (k3\_xxreal\_0 X0 X1 = X0)) \wedge ((\neg r1\_xxreal\_0 X0 X1) \Rightarrow (k3\_xxreal\_0 X0 X1 = X1)))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xxreal\_0 X0) \wedge (v1\_xxreal\_0 X1)) \Rightarrow (k4\_xxreal\_0 X0 X1 = k4\_xxreal\_0 X1 X0) \quad (3)$$

Assume the following.

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (v1\_xxreal\_0 X0) \quad (4)$$

### Theorem 1

$$\forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (r1\_xxreal\_0 (k3\_xxreal\_0 X0 X1) (k4\_xxreal\_0 X0 X1)))$$