

You are using countermodel generation for classical predicate logic.

Tableau for

$\exists y \forall x R(x, y)$

$\not\models \forall x \exists y R(x, y) :$

3. $\forall x R(x, a)$ $(\exists, 2, [y/a]*)$											
4. $\neg \exists y R(a, y)$	$(\neg \forall, 1, [x/a])$	11. $\neg \exists y R(b, y)$	$(\neg \forall, 1, [x/b]*)$	30. $\neg \exists y R(c, y)$	$(\neg \forall, 1, [x/c]*)$	59. $\neg \exists y R(d, y)$	$(\neg \forall, 1, [x/d]*)$	8. $\neg \exists y R(b, y)$			
5. $\neg R(a, a)$	$(\neg \exists, 4, [y/a])$	12. $\neg R(b, a)$	$(\neg \exists, 11, [y/a])$	31. $\neg R(c, a)$	$(\neg \exists, 30, [y/a])$	60. $\neg R(d, a)$	$(\neg \exists, 59, [y/a])$	9. $\neg R(b, b)$			
6. $R(a, a)$	$(\forall, 3, [x/a])$	13. $R(a, a)$	$(\forall, 3, [x/a])$	32. $R(a, a)$	$(\forall, 3, [x/a])$	61. $R(a, a)$	$(\forall, 3, [x/a])$	10. $R(b, b)$			
$\times$	$(5, 6)$	14. $\neg R(b, b)$	$(\neg \exists, 11, [y/b])$	33. $\neg R(c, c)$	$(\neg \exists, 30, [y/c])$	62. $\neg R(d, d)$	$(\neg \exists, 59, [y/d])$	$\times$			
		20. $R(b, a)$	$(\forall, 3, [x/b])$	34. $R(c, a)$	$(\forall, 3, [x/c])$	63. $R(d, a)$	$(\forall, 3, [x/d])$				
		$\times$	$(12, 20)$	$\times$	$(31, 34)$	$\times$	$(60, 63)$				

The tableau is potentially infinite:

The inference may or may not be refutable.

This computation took 0.364 seconds.