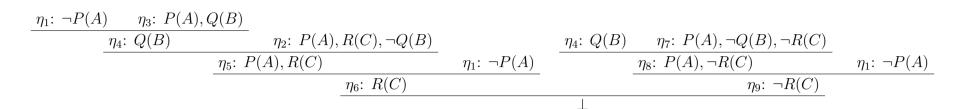
# 1 Local Redundancy

We first consider an example first posed by Postan:

Which is locally redundant; see the compressed version in his document.

## 2 "Example 2"

We consider example 2, from the LU/RPI paper, modified for first order predicates in a trivial way:



#### 2.1 Lower Units

Proceeds exactly the same as in the paper.

**TODO:** show exact steps?

**TODO:** cases where we can lower larger formulas, namely non-units, as long as they're unifiable (and subject to the other same conditions?)

### 2.2 RecyclePivots

Again, proceeds like in the paper.

## 3 A larger proof

**TODO:** We consider the following proof:

	$\vdash$ (le U U) (le (max U V) W) $\vdash$ (le V W	7)						
	⊢ (le V (max U V))	$(eq (f V) 0), (eq (f U) 0), (le (s U) V) \vdash$		$(le (max U V) W) \vdash (le U W) \qquad \vdash (le U U)$				
$\vdash$ (le U U) (eq (f V) 0), (eq (f U) 0), (le (s U) V) $\vdash$	(eq (f (max X	(s U))) 0), (eq (f U) 0) ⊢	$\vdash$ (eq (f U) 0), (eq (f U) 1)	$\vdash$ (le U (max U V))	(eq (f V) 1), (eq (f U) 1), (le (s U) V) $\vdash$			
$\vdash (eq (f U) 0), (eq (f U) 1) \qquad \qquad (eq (f (s U)) 0), (eq (f U) 0) \vdash$	$(eq (f U) 0) \vdash (eq (f (max X (s U))))$		)) 1)	$(eq (f (max (s U) X)) 1), (eq (f U) 1) \vdash$				
$(eq (f U) 0) \vdash (eq (f (s U)) 1)$	$(eq (f W) 0), (eq (f U) 1) \vdash$							
	(eq (f X) 0), (eq (f W) 0	) <b>-</b>					$(eq (f V) 1), (eq (f U) 1), (le (s U) V) \vdash (eq (f V) 1), (eq (f U) 1), (le (f U) 1)$	e (s U) V)
	$(eq (f X) 0) \vdash$					$\vdash$ (eq (f U) 0), (eq (f U) 1)	$(eq (f (s U)) 1), (eq (f U) 1) \vdash$	

L