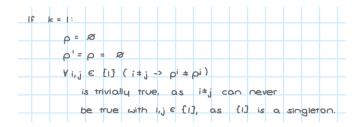
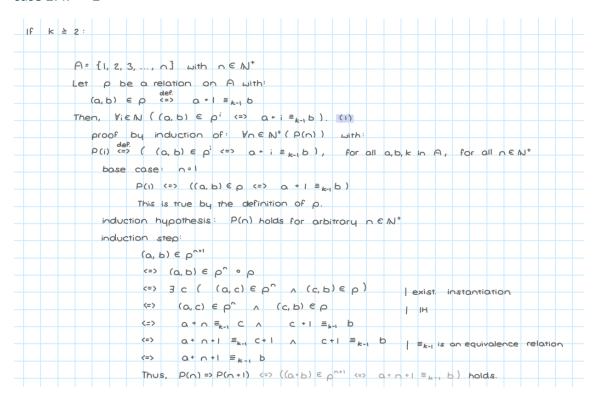
# Repeating Relations





### case 2: k >= 2



## Nina Gassner

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As I ≡ k , by	$(2), \rho = \rho^k$		
	, k-13 (i+j -> pi + pi	)	
This can be show	n by contradiction.		
Suppose that this	was false. Then, there	would be $i, j$ in $\{1,\}$	, k-13 with:
i±j and	$\rho^i = \rho^j$ .		La contro d'ation
			xplanation by contradiction:
However,	$i \neq j$ and $i, j \in \{1,, k\}$	-1] Su	uppose that i≡Mj and i,j € {1, 2,, k-1} and i≠j
	=> i ± k-1 j   (2)	Th	nen, (i-j) = a(k-1) with some a∈ Z.
		Ho	oωever, -k+2 ≤ i-j ≤ k-2
	=> p' + pi	Th	hus, a would have to be 0, meaning that i-j = 0
			=> i = j
		Th	herefore, $i=k-1$ $j \wedge i, j \in \{1,,k-1\} \wedge i \neq j$
			is unsatisfiable

### Nina Gassner

## (used step:)

