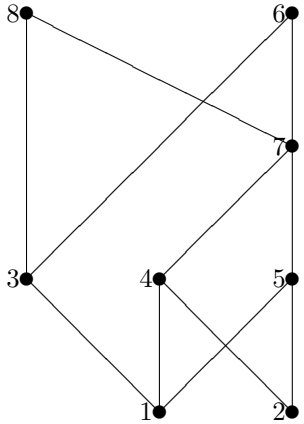
Name ..... group AA... row .... col....

1.	2.	3.	$\sum$

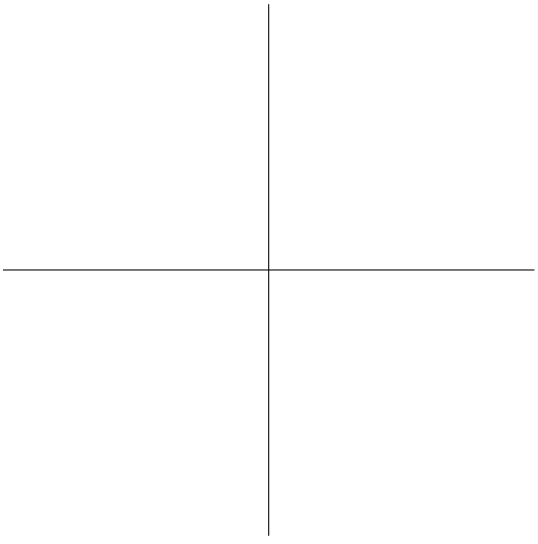
1. Find sup and inf for every par of elements



inf	1	2	3	4	5	6	7	8
1	1	x	x	x	x	x	x	x
2		2	x	x	x	x	x	x
3			3	x	x	x	x	x
4				4	x	x	x	x
5					5	x	x	x
6						6	x	x
7							7	x
8								8

2. Find $f(A)$ and $f^{-1}(f(A))$ for $A = [-2, 2] \times [1, 2]$ and $f : \mathbb{R}^2 \to \mathbb{R}$,

$$f(x, y) = \frac{1}{(x + y)^2 + 1}$$

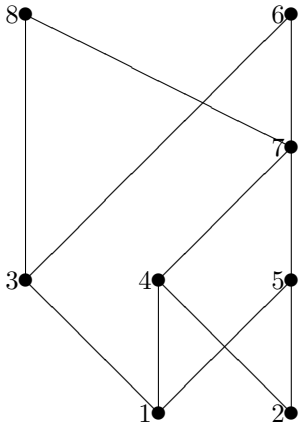


3. For $x, y \in \mathbb{N}$ $x \preceq y$ iff $x = y \vee 2x \leq y$. Prove that $\preceq$ is a partial order. Draw the Hasse diagram for $(\{1, .., 9\}, \preceq)$.

Name ..... group AA... row .... col....

1.	2.	3.	$\sum$

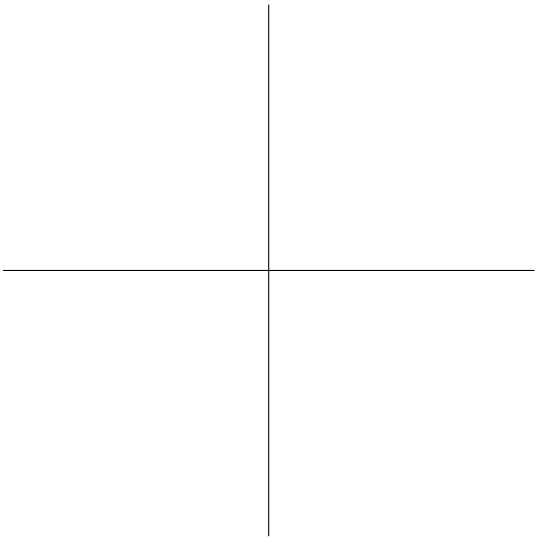
1. Find sup and inf for every par of elements



sup	1	2	3	4	5	6	7	8
1	1							
2	x	2						
3	x	x	3					
4	x	x	x	4				
5	x	x	x	x	5			
6	x	x	x	x	x	6		
7	x	x	x	x	x	x	7	
8	x	x	x	x	x	x	x	8

2. Find $f(A)$ and $f^{-1}(f(A))$ for $A = [-1, 2] \times [1, 2]$ and $f : \mathbb{R}^2 \to \mathbb{R}$,

$$f(x, y) = \frac{1}{x^2 + y^2 + 1}$$



3. For $x, y \in \mathbb{N}$ $x \preceq y$ iff $x = y \vee x^2 \leq y$. Prove that $\preceq$ is a partial order. Draw the Hasse diagram for $(\{1, .., 9\}, \preceq)$.