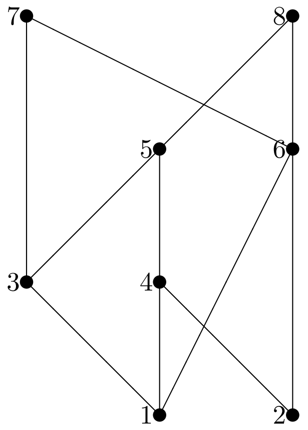
Name .... group EA... row .... col....

1.	2.	3.	$\sum$

1. Find 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

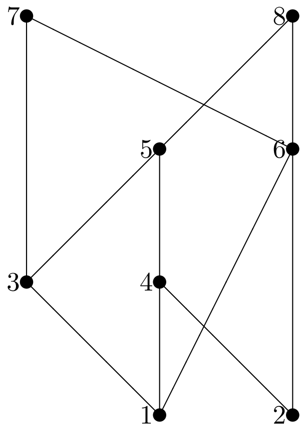
2. $k, n \in \mathbb{N}_+$ $k \preceq n$ iff $2k|n \vee k = n$. Prove that $\preceq$ is a partial order. Draw the Hasse diagram for $(\{p \in \mathbb{N} : p|60\}, \preceq)$.

3. For $k, n \in \mathbb{N}_+$ $k \sim n \Leftrightarrow (\forall p \in \mathbb{P}\ p|k \Leftrightarrow p|n)$, where $\mathbb{P}$ is the set of odd numbers. Prove $\sim$ is equivalence relation in $\mathbb{N}_+$. Find equivalence classes $[9]_\sim$ and $[6]_\sim$.

Name ....   group EA... row .... col....

1.	2.	3.	$\sum$

1. Find sup 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. $k, n \in \mathbb{N}_+$ $k \preceq n$ iff $\exists j \in \mathbb{N}\ (2j+1)k|n$. Prove that $\preceq$ is a partial order. Draw the Hasse diagram for $(\{p \in \mathbb{N} : p|60\}, \preceq)$.

3. For $k, n \in \mathbb{N}_+$ $k \sim n \Leftrightarrow (\forall p \in \mathbb{P}\ p|k \Leftrightarrow p|n)$, where $\mathbb{P}$ is the set of prime numbers. Prove $\sim$ is equivalence relation in $\mathbb{N}_+$. Find equivalence classes $[4]_\sim$ and $[6]_\sim$.