

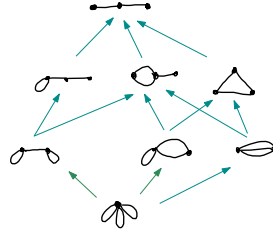
## MSF - TAREA 2

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0. (*poset of graphical matroids*)

Convince yourself that the following is the poset on graphs on  $[n]$  whose covering relation is given by

$g \lessdot h \leftrightarrow$  every circuit of  $h$  is union of circuits in  $g$ .



1. (a) Give an example of a graphical matroid  $M$  of rank 3 on  $[6]$ .  
 (b) Determine all the graphical matroids  $N$  of rank 3 on  $[6]$  such that  $N \lessdot M$ .  
 (c) How can you tell those are all?
2. (*LPMs*)  
 (a) Determine which graphical matroids from exercise 0 are LPMs.  
 (b) Draw the poset of exercise 0 using LPMs.  
 (c) What would be the covering relation in terms of LPMs?