

Assignments, January 16

7. (2 pts) Find all subgroups of  $\mathbb{Z}/6\mathbb{Z}$  and show the subset containments between them (you'll probably want to do this in one big diagram).
8. (3pts) Show that  $\mathbb{Z}/5\mathbb{Z}$  has no non-trivial subgroups. (i.e.  $\{\bar{0}\}$  and  $\mathbb{Z}/5\mathbb{Z}$  are the only ones)