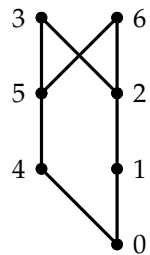


## WEEK FIFTEEN - FIRST FINAL EXAM

**Exercise 1.** Let  $(A, \leq)$  be a p.o.c. Suppose that there are two maximal chains  $C \neq D$ . Then  $A$  is not a f.o.c.

**Exercise 2.** Is it true that  $\mathcal{P}(2) = 4$ ? explain (and remember that  $2 = \{0,1\}$  and  $4 = \{0,1,2,3\}$ )!

**Exercise 3.** The following graph represents an order relation



Please, write

- (1) the maximal chains
- (2) the sections which contain 1 and 5
- (3) how many different initial segments are there.