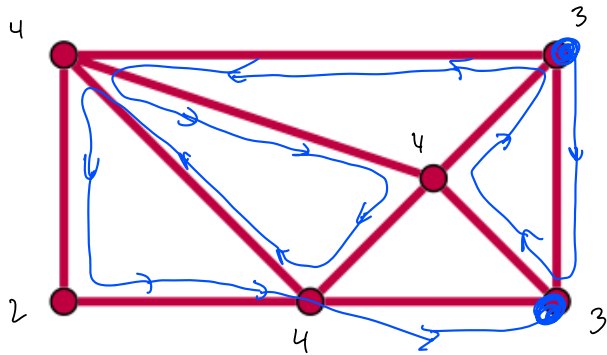


Math 1615 HW #9

#2, 3ab, 6a, 7ab

#2 If they make a graph of friends,  
 the degrees would be: 3, 2, 1, 3, 0 (all not including me)  
 So the total sum of degrees would be  $3+2+1+3=9$ ,  
 which is odd. This is impossible by the sum-of-degrees theorem.

#3a

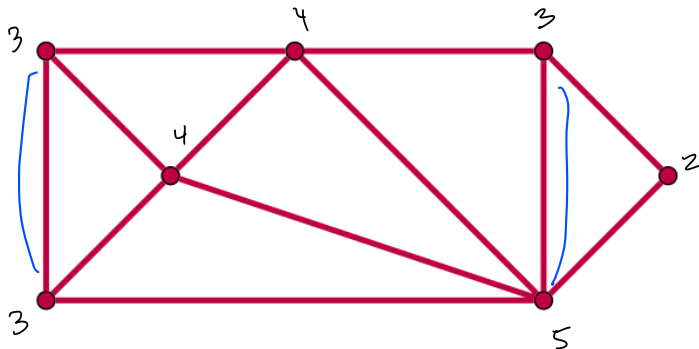


It has an Euler path

#3b

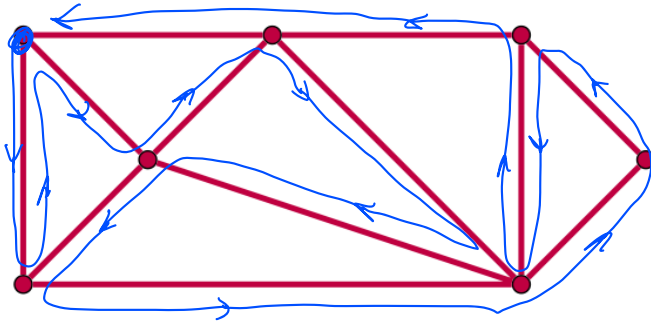
Has many odd vertices, so no E. circ or E. path.

#6a

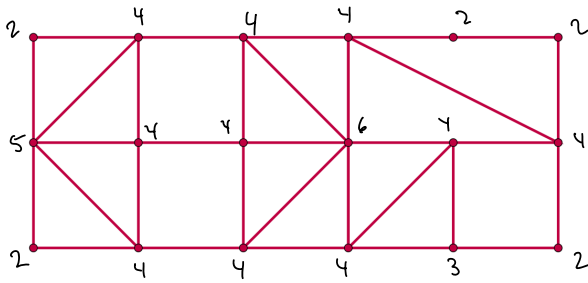


I'll do a min dup circ.

duplicate these 2

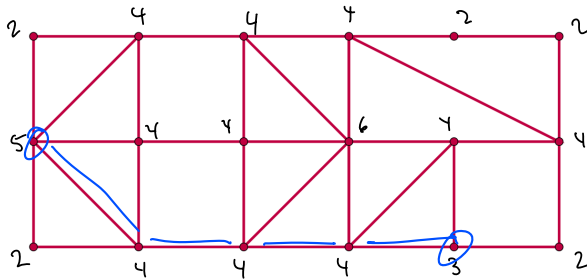


#7



a There are 2 odds, so there is an E. path.

b



I would do these 4 dupes.