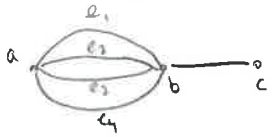
Math 300 HW #8

Section 10.2 #5, 7, 13, 16, 24

#5



a a path can't repeat, so there are 4 paths, one for each choice of e_1, e_2, e_3, e_4

b Each of the above paths is a trail, plus some which go back-and-forth from a to b.

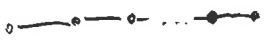
We can use 3 of those edges e_1, e_2, e_3, e_4

$4 \cdot 3 \cdot 2$ $\quad$ $4 \cdot 3 \cdot 2$ choices

So it's $4 + 4 \cdot 3 \cdot 2 = 28$

c ∞ly many walks, since we could go back and forth as many times as we want

#7

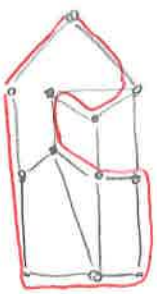
a)  with n edges

b)  with n edges

#13 Has no Euler circuit - v_3 has odd degree

#16 Has no Euler circuit - not connected

#24



color!