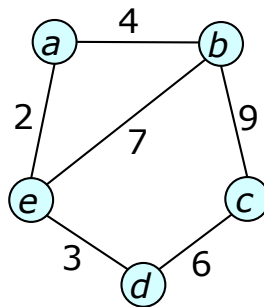


Review Questions 16

Your Name:

Please print out this form (two-sided, if you can) and write your answers *legibly* in the spaces provided. If you can't write legibly, type.

1. Consider the linear program for the matching problem below, with the extra constraints needed to ensure the existence of integer optimal solutions that match the original ILP. How many variables are required for this problem? How many constraints? How many variables in the corresponding dual program?



2. Suppose that in the above problem, $z_a=2$, $z_b=1$, $z_c=5$, $z_d=1$, $z_e=1$, $z_{\{a,b,c\}}=1$, $z_{\{a,b,e\}}=3$, $z_{\{b,c,d\}}=4$, and $z_{\{a,b,c,d,e\}}=1$. For all other odd subsets B , $z_B=0$. For the edge ab , what is the value of z_{ab} ? What is the value of z_{cd} ?

3. In the previous problem, which of the edges, if any, are equality edges? Which of the conditions in the theorem on slide 4 is satisfied? For each that is not, show that it is not.