

GRAPH THEORY: HOMEWORK PROBLEM SET 4

Please hand in following problems below. If you have any questions, please feel free to ask me after class or during office hour.

Homework 4 dues on Tuesday June 17th.

Problems from the book: 5.2,5.3,5.5,5.12,5.18,5.21,5.24.

Also do the problems below:

1) Consider the graph below:

- a) Find the minimum number of vertices separating A from B .
- b) Find the maximum number of disjoint $A - B$ paths in G .
- c) Use Menger's Theorem to verify your results in part a) and b).

2) Consider the network below:

- a) Find the minimum capacity of any cut in the network.
- b) Find the maximum possible value of any flow in a network.
- c) Use The max-flow min-cut theorem to verify your results in part a) and b).