

Review Questions 2

Your Name:

The purpose of review questions is to help motivate you to complete the reading assignment. Once you have done the reading, the review questions should take you at most 30 minutes. They must be handed in at the start of each class when they will be discussed. They will be checked to make sure you made a good-faith effort, but will not be graded or returned.

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. Draw a picture of an undirected graph with vertices a, b, \dots, f and edges $ab, ad, ae, bc, be, bf, cd, ce, df$ and ef with edge weights 8, 3, 6, 1, 4, 5, 7, 2, 10, 9 (in that order). Apply the blue rule to the graph three times. In each case, identify the cut you are using and the edge selected.

2. Repeat problem 1, but apply the red rule three times. In each step, specify the cycle you used and the edge selected.

3. Consider an algorithm that applies the red rule until it can no longer do so. At this point, the remaining edges can be colored blue. Explain why the blue rule can be correctly applied in each of the remaining steps.