

Homework Assignment #3 (50 points, weight 10%)

Due: Wed, November 20 (also acceptable until Friday, November 22)

1. (10 points) **Finding isomorphism by hand**

Do exercise 7.1 of the textbook.

2. (10 points) **Certificate for trees**

Do exercise 7.2 of the textbook. Simulate the algorithm by hand computation, showing your tree and labels at each step.

3. (10 points) **Reverse the certificate for a tree**

Do exercise 7.3 of the textbook. Show how the tree is built step by step.

4. (20 points) **Certificate for graphs**

Apply Algorithm 7.8 by hand, in order to compute a certificate for the following graph. Show your backtracking tree. (Note that before the first branch is explored, there is a call to procedure REFINE). (note this is the first algorithm seen, not the one where you prune with automorphisms)

