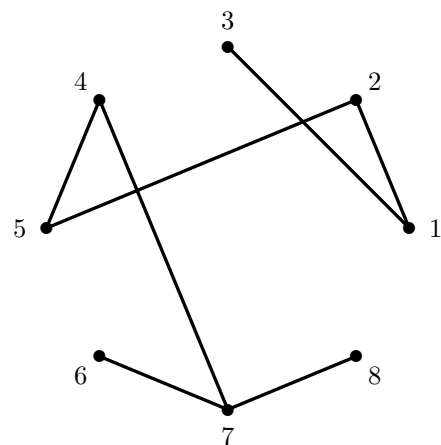
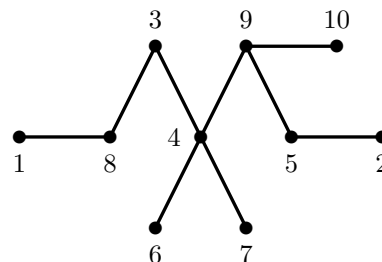


1. (6 points) Sketch the tree given by the Prüfer sequence 1, 2, 5, 4, 7, 7.

The tree is shown. We make the following observations. Notice that the leaves 3, 6, and 8 do not appear in the sequence, as expected. Also, $\deg(7) = 3$, again as expected.



2. (6 points) Find the Prüfer sequence for the tree shown below.



Solution:

We expect that leaves 1, 2, 6, 7 and 10 will not appear in the sequence. We also expect that 4 will appear three times and 9 will appear twice. Finally, the resulting sequence should have 8 terms:
8, 5, 9, 4, 4, 3, 4, 9