

CS XXX, Fa,Sp,Su 20XX – HW XX

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1 Numbering

1.1 a, b, c

- a) First.
- b) Second.
- c) Third.

1.2 1, 2, 3

- 1) First.
- 2) Second.
- 3) Third.

1.3 i, ii, iii

- i) First.
- ii) Second.
- iii) Third.

2 Code

```
1  def relabel(root):
2      relabel_explore(root, [])
3
4  def relabel_explore(node, parents):
5      parents.append(node)
6      for child in node.children:
7          relabel_explore(child, parents)
8      idx = max(len(parents) - 1 - node.label, 0)
9      node.label = parents[idx].label
10     parents.pop()
```
