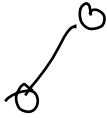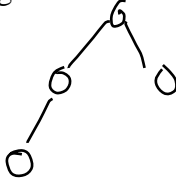# CSE332 15su 2015-07-16

Section 4 Quick Check

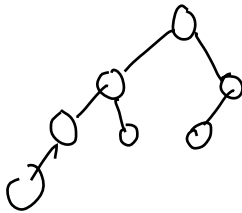1. Draw an AVL tree of height 1 that contains the *minimum* possible number of nodes.

2

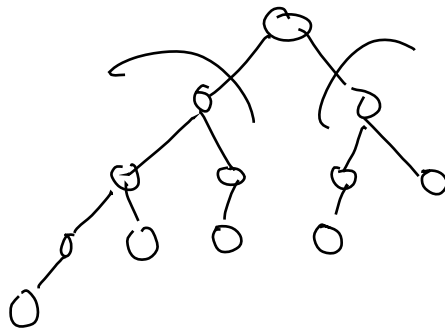2. Draw an AVL tree of height 2 that contains the *minimum* possible number of nodes.

4

3. Draw an AVL tree of height 3 that contains the *minimum* possible number of nodes.

7

4. Draw an AVL tree of height 4 that contains the *minimum* possible number of nodes.

12

$\alpha = 2$

$= \phi$

$1.61...$

$n \in O(\alpha^n)$

5. Extra time: What's the general formula for the *minimum* possible number of nodes for an AVL Tree?

$$T(n) = \begin{cases} T(n-1) + T(n-2) + 1 & n > 1 \\ 2 & n = 1 \\ 1 & n = 0 \end{cases}$$