

### Huffman Tree Example

The Huffman tree example I gave in class was very “linear”. Below is a “bushier” example of a Huffman tree. For more examples see *CLRS* 16.3/*CLR*17.3.

Suppose we are given the following table of letter frequencies:

a	b	c	d	e	f
1	2	3	4	5	6

Then the following diagrams show the steps in creating a Huffman coding tree for this example. Each box indicates the contents of a priority queue of trees, where trees with lower frequency values have higher priority. At each step, the two smallest frequency trees are merged to form a higher frequency tree. This continues until there is only one tree.

