Homework 6

1. (10') Problem 5.1

   Note: Ignore the last sentence of (c).

2. (10') Problem 5.2

   Note: For (b), you can assume that path compression is not used.

3. (10') Suppose the symbols A, B, C, D, E, F, G, H occur with frequencies 6%, 8%, 2%, 60%, 2%, 12%, 6%, 4%, respectively.

   (a) What is the Huffman encoding of the alphabet?

   (b) If this encoding is applied to a file consisting of 1,000,000 characters with the given frequencies, what is the length of the encoded file in bits?

4. (10') Problem 5.7

5. (10') Problem 5.11

   Note: You do *not* need to use path compression.