Computer Networks 22/23

Homework 6

Problem 1 (50%)

Subnet the (class B) network 175.50.0.0 into 40 subnets of the same size. Find:

a) the new subnet mask,
b) the number of addresses in each subnet,
c) the first and last address in subnet 1,
d) the first and last address in subnet 3.

Problem 2 (50%)

a) Compress the (IPv6) address 6B42:00F0:D258:0000:0000:0000:AF38:F400.
b) Decompress the address AA12::1.
c) Why is the rule of replacing consecutive "0000" sections with "::" only allowed to be used once? (Hint: for example, where would you encounter a problem when decompressing the invalid address 1234::BBBB::7777?)