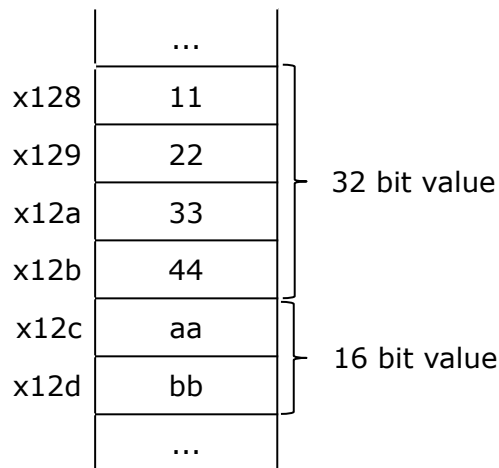


## Quiz 2 Solution

Your name here:

9/24/2012

1. (5 points). The diagram below shows the bytes that define a 32 bit integer and a 16 bit integer as they are stored in a computer's memory.



Assuming that the computer is “little-endian”, what is the actual value of these two integer variables? You may write the values in hex.

*The 32 bit value is x44332211, the 16 bit value is xbbaa*

What are the values if the computer is big-endian?

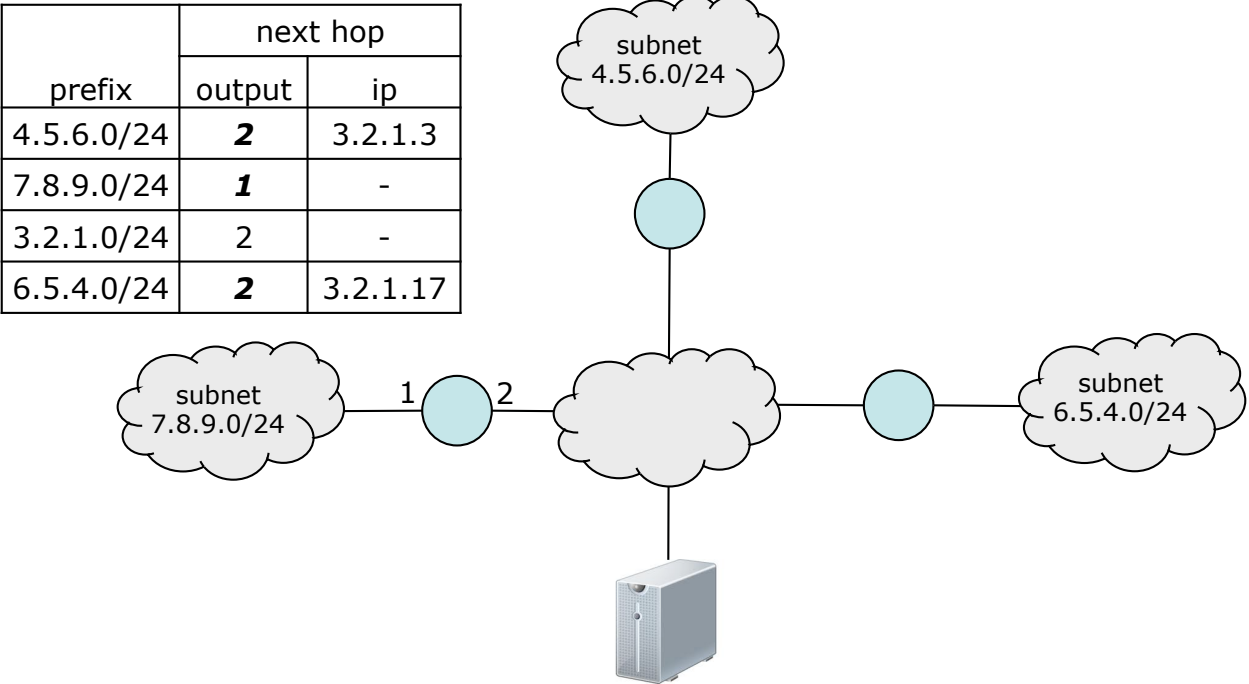
*The 32 bit value is x11223344, the 16 bit value is xaabb*

In what order should these 6 bytes be transmitted over the Internet?

*the most significant byte should be sent first, so for the little-endian case, the correct answer is x44, then x33, x22, x11, xbb, xaa*

*for the big-endian case, the correct answer is x11, x22, x33, x44, xaa, xbb*

2. (5 points) The diagram below shows three routers and four layer 2 networks. The table is the routing table for the left-hand router.



In three of the entries in the routing table, the output has been left blank. Fill in the missing values.

Based on the information in the table, what is the IP address of the interface that connects the top router to the central subnet?

3.2.1.3

What is the IP address of the interface that connects the right-hand router to the central subnet?

3.2.1.17

What is the subnet prefix for the central subnet?

3.2.1.0/24