Worksheet 3

Assume the following values are stored at the indicated memory addresses and registers:

Address	Value	Register	Value
0x100	0xFF	%eax	0x100
0x104	0xAB	%ecx	0x1
0x108	0x13	%edx	0x3
0x10C	0x11		
0xAB	0x5		

1) What are the values of the following operands?

a) 8(%eax)   b) 0xC(%eax)   c) 260(%ecx,%edx)   d) 9(%eax,%ecx, -1)

2) What is the output value and the destination where it's stored for these instructions?

a) addl $16, (%eax, %ecx, 4)   b) subl %edx, 0x104
c) leal 4(%ecx), %edx

3) Are these instructions legal/allowed?

a) movl %ax, (%esp)   b) movw (%eax),4(%esp)
c) movw (%eax), %dx   d) movw %dx, (%eax)
e) movb (%esp,%edx,4), %dh

4) Suppose register %eax holds value x and %ecx holds value y. Fill in the table below with formulas indicating the value that will be stored in register %edx for each of the given assembly code instructions:

a) leal 6(%eax), %edx   b) leal (%eax,%ecx,4), %edx
c) leal 7(%eax,%eax,8), %edx   d) leal 9(%eax,%ecx,2), %edx