Solutions 9

Question 1

a) 0xFF5F {{1}}

b) 0x8000 {{2}}

c)
bar += 1 or bar++ or ++bar {{2}}
foo = 0xF5 - bar;

d) {{2}}
bar: 0xF6
foo: 0xFFFF

Question 2:

a) {{2}}
sizeof(foo) == 2. A 16-bit numbers requires 2 bytes in memory.
sizeof(bar) == 4. Any pointer types require 4 bytes (32-bits) to hold a memory address

b) I messed this one up and forgot the "[ ]" after myArray. (should be myArray[])
Anyway, the answer I was looking for was:
5 x 4 = 20
But due to this error the actual value will be 4
Accept either. {{1}}

c) Illegal. The address of a variable is fixed at build time. It cannot be changed during execution. {{1}}

d) Legal. bar is a pointer type and can be set to point to any address. {{1}}

(I'm not really sure what I wanted in terms of explanations here….)

Question 3

a) The member access operator works on variables of type struct. The indirect member access operator works on pointers to structs by first dereferencing the pointer and then accessing the member of the dereferenced struct.
{{2}}

b) {{2}}
0x2000 016C
0x2000 016D
0x2000 016E
0x2000 016F