1. What is the output of this code (what is printed)?

```python
n = 3
while n > 0:
    if (n == 5):
        n = -99
    print(n)
    n = n + 1
```

Answer: C  
When this code runs, n takes on the values 3, 4, 5 (which triggers if statement), -99, -98 (which exits loop)  
so this code will print  
3  
4  
-99

A 3  
4  
B 3  
4  
5  
C 3  
4  
-99  
D 3  
4  
5  
-99  
E I don't know

2. A valid password is one that is length 5 and starts with "xy". A valid password should terminate the loop. Which of these implements that specification?

The input function reads a string typed by the user, that is it prints its argument as a prompt and returns whatever the user types as a string (after the user hits enter).

A while True:
    s = input ("Enter a password: ")
    if len(s) == 5 and s[:2] == 'xy':
        break

Answer: A  
In answer A, the loop will continue *until* s satisfies the specifications. In answer B, the loop does the opposite, it continues *while* s meets the specification.

B s = input ("Enter a password: ")
    while len(s) == 5 and s[:2] == 'xy':
        s = input ("Enter a password: ")

C Both A & B are correct  
D Neither A or B are correct  
E I don't know
3. Will the following loop terminate, be guaranteed to be an infinite loop, or will it depend?

```python
a = 0
i = 0
while i < 10:
    a = a + 1
```

A. Terminate or not execute
B. Infinite loop
C. Depends

Answer B.
This loop will be an infinite loop because the loop body does not change i, which remains < 10