Practice Sheet: while loop

Predict the output carefully before running the code. *Focus on while loop termination conditions, iterations, and nested loops for better understanding!*

1.
```
n = 5
while n > 0:
    n -= 1
    print(n * 2)
```

2.
```
n = 1
total = 0
while total < 15:
    total += n
    n += 2
print(total)
```

3.
```
num = 1234
reverse = 0
while num > 0:
    reverse = reverse * 10 + num % 10
    num //= 10
print(reverse)
```

4.
```
result = 1
n = 1
while result < 100:
    result *= n
    n += 1
print(result)
```

5.

```
text = "python"
index = len(text) - 1
while index >= 0:
    print(text[index])
    index -= 2
```

6.

```
n = 10
while n > 0:
    if n % 2 == 0:
        print(n, end=" ")
    n -= 1
```

7.

```
n = 1
total = 0
while n <= 5:
    total += n ** 2
    n += 1
print(total)
```

8.

```
text = "loop"
index = 0
ascii_sum = 0
while index < len(text):
    ascii_sum += ord(text[index])
    index += 1
print(ascii_sum % 10)
```

9.

```
n = 5
factorial = 1
while n > 1:
    factorial *= n
    n -= 1
print(factorial)
```

10.

```
n = 29
i = 2
is_prime = True
while i * i <= n:
    if n % i == 0:
        is_prime = False
        break
    i += 1
print(is_prime)
```

11.

```
a, b = 0, 1
count = 0
while count < 7:
    print(a, end=" ")
    a, b = b, a + b
    count += 1
```

12.

```
n = 9875
while n >= 10:
    temp = 0
    while n > 0:
        temp += n % 10
        n //= 10
    n = temp
print(n)
```