Runtime Practice
How many steps are needed for each of the following code blocks? Classify each one as either:
$O(1)$, $O(\log n)$, $O(n)$, $O(n \log n)$, or $O(n^2)$.

1. `n = int(input("n: "))
   for i in range(n):
       print(i)

2. `n = int(input("n: "))
   for i in range(100):
       print(i*n)

3. `n = int(input("n: "))
   for i in range(n):
       print(i)
       for j in range(n):
           print(j)

4. `n = int(input("n: "))
   for i in range(n):
       for j in range(n):
           print(i, j)

5. `n = int(input("n: "))
   for i in range(n):
       for j in range(i, n):
           print(i, j)

6. `n = int(input("n: "))
   for i in range(n):
       for j in range(10):
           print(i, j)

7. `n = int(input("n: "))
   while n > 1:
       print(n)
       n = n/2

8. `lst = [1,2,5,7,13,21,24,25,26,33,34,38,50,57,58,63]
    n = len(lst)
    mid = n//2
    print lst[mid]

9. `n = int(input("n: "))
    for i in range(n):
        k = n
        while k > 1:
            print(i, k)
            k = k/2