1. What is the time, space complexity of following code:

int a = 0, b = 0;

for (i = 0; i < N; i++) {

a = a + 1;

}

for (j = 0; j < M; j++) {

b = b + j;

}

1. Time Complexity: O(NM)

Space Complexity: O(NM)

2) What does it mean when we say that an algorithm X is asymptotically more efficient than Y?

a)X will be a better choice for all inputs

b)X will be a better choice for all inputs except possibly small inputs

c)X will be a better choice for all inputs except possibly large inputs

d)Y will be a better choice

1. c)

3) Write a Python program to print even numbers in a list.

1. list1=input().split()

list1 ## Numbers are string data type. Convert them to int

for n in range(0,len(list1)):

list1[n]=int(list1[n])

l=[]

for i in range(0,len(list1)):

if list1[i]%2==0:

l.append(list1[i])

l