import math

case9 = [8, 13, 18, 23, 28, 36, 41, 46, 51]

def readFile():
    fp = open("test-int.txt", "r")
    for line in fp.readlines():
        line = line.strip().split()
        letsPlay(organize(line))

def organize(input):
    global blocked
    global markers
    blocked, markers = [], []
    blocked.append(int(input[0]))
    blocked.append(int(input[1]))
    blocked.append(int(input[2]))
    markers.append(int(input[3]))
    markers.append(int(input[4]))
    markers.append(int(input[5]))
    markers.sort()
    del input[0:6]
    return input

def checkPrime(num):
    for i in range(2, num//2):
        if num%i==0:
            return False
    return True

def letsPlay(move):
    move.remove(move[0])
    for i in move:
        markers.sort()
        taken = markers + blocked
        taken.pop(0)
        taken.sort()
        i = int(i)
        nextMove = markers[0] + i
        currentPosition = markers[0]
        # Checks if another piece is in the way
        if nextMove in taken:
            continue
        # Checks if the piece is at the end of the board
        elif nextMove == 52:
            markers.remove(markers[0])
            continue
        # Checks if the piece is past the board
        elif nextMove > 52:
            continue
        # Checks if the piece is on a prime number
        elif checkPrime(nextMove):
            check = True
            for l in taken:
if nextMove<=l<=nextMove+6 and l - 1 not in taken:
    markers[0] = l - 1
    check = False
    break
if check and nextMove+6 not in taken:
    markers[0] = nextMove+6
#Checks if the piece is perfect square greater than 4
elif math.sqrt(nextMove).is_integer() and math.sqrt(nextMove) >=4:
    check = True
    taken.reverse()
    for m in taken:
        if nextMove - 6 <= m <= nextMove and m+1 not in taken:
            markers[0] = m + 1
            check = False
            break
    if check and nextMove-6 not in taken:
        markers[0] = nextMove-6
#Checks the "L" shape condition
elif math.sqrt(nextMove).is_integer() is False:
    found = True
    for x in case9:
        if currentPosition<=x-2 and x<=nextMove:
            for y in range(nextMove,currentPosition,-1):
                if y%i == 0 and y not in taken:
                    markers[0] = y
                    found = False
                    break
        if found is False:
            break
    else:
        found = False
        if found and nextMove not in taken:
            markers[0] = nextMove
else:
    if nextMove not in taken:
        markers[0] = nextMove
    markers.sort()
    if len(markers)==0:
        print("GAME OVER")
    else:
        print(*markers,sep=" ")
readFile()