

```
#RamannR
#Junior-Patolli
```

```
def isPrime(num):
    for i in range(2, int(num / 2) + 1):
        if(num % i == 0):
            return False
    return True

def isPerfectSquare(num):
    for i in range(1, int(num / 2) + 1):
        if(i * i == num):
            return True

    return False

def solveProblem(user):
    m1 = int(user[0])
    m2 = int(user[1])
    m3 = int(user[2])
    player = int(user[3])
    rolls = user[5:]
    horizontalVertical = [(6,8), (11,13), (16,18), (21,23), (26,28), (34,36), (39,41), (44,46),
    (49,51)]

    for i in range (0, len(rolls)):
        rolls[i] = int(rolls[i])

    for i in range(0, len(rolls)):
        player = player + rolls[i]

        if(player == m1 or player == m2 or player == m3):
            player = player - rolls[i]
        elif(player == 52):
            return("GAME OVER")
        elif(player > 52):
            player = player - rolls[i]
        elif(isPrime(player) == True):
            blockingMarkers = []
            if(player < m1 <= player + 6):
                blockingMarkers.append(m1)
            if(player < m2 <= player + 6):
                blockingMarkers.append(m2)
            if(player < m3 <= player + 6):
                blockingMarkers.append(m3)
            if(blockingMarkers != []):
                player = min(blockingMarkers) - 1
            else:
                player = player + 6
        elif(player > 4 and isPerfectSquare(player)):
            blockingMarkers = []
            if(player - 6 <= m1 < player):
                blockingMarkers.append(m1)
            if(player - 6 <= m2 < player):
                blockingMarkers.append(m2)
            if(player - 6 <= m3 < player):
                blockingMarkers.append(m3)
            if(blockingMarkers != []):
                player = min(blockingMarkers) + 1
            else:
                player = player - 6
        elif(isPerfectSquare(player) == False and isPrime(player) == False):
            ogPosition = player - rolls[i]
            madeHorizontalVerticalMove = False
            for j in range(0, len(horizontalVertical)):
                if(ogPosition <= horizontalVertical[j][0] and player >=
                horizontalVertical[j][1]):
                    madeHorizontalVerticalMove = True
                    break
```

```
if(madeHorizontalVerticalMove == True):
    lastPos = int(player / rolls[i]) * rolls[i]
    if(m1 != lastPos and m2 != lastPos and m3 != lastPos):
        player = lastPos
    else:
        player = player - rolls[i]
```

```
return player
```

```
f = open("c4.txt", "r")
```

```
data = f.read()
```

```
data = data.split("\n")
```

```
for i in range(0, len(data)):
```

```
    data[i] = data[i].split(" ")
```

```
for i in range(0, len(data)):
```

```
    print(solveProblem(data[i]))
```