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import math

class patolliboard(object):

    def __init__(self, opponent, player, numrolls, rolls):

        #True is unoccupied
        #False is occupied

        self.board = ['zeroindex']
        for i in range(52):
            self.board.append(True)

        self.opponent = list(map(int, opponent))
        for marker in self.opponent:
            self.board[marker]=False
        self.opponent.sort()

        self.player = list(map(int, player))
        for marker in self.player:
            self.board[marker]=False
        self.player.sort()

        self.numrolls = int(numrolls)
        self.rolls = list(map(int, rolls))
        #print("Rolls: ")
        #print(self.rolls)

    def output(self):
        playermarkers = []
        for marker in self.player:
            if(marker != 4828):
                playermarkers.append(marker)
        opponentmarkers = []
        for marker in self.opponent:
            if(marker != 4828):
                opponentmarkers.append(marker)

        return sum(opponentmarkers), sum(playermarkers)

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def checkprime(self, pos):
    for i in range(2, int(math.sqrt(pos))+1):#+1 puts sqrt in range
        if(pos%i==0):
            return False
    return True

def checkperfectsquare(self, num):
    return(num in [9,16,25,36,49])

def checkhv(self,oldpos,newpos):
    cases = [7, 12, 17, 22, 27, 35, 40, 45, 50]
    for case in cases:
        if (oldpos<case and newpos>case):
            return True
    return False

def playgame(self):
    for j in range(self.numrolls):
        #print(self.opponent)
        #print(self.player)
        roll=self.rolls[j]
        #print(roll)
        if(j%2==0):
            currentplayer=self.opponent
        else:
            currentplayer=self.player

        marker = currentplayer[0]
        newpos = marker + roll
        #print(marker, newpos)

        if(newpos==52):
            self.board[marker]=True
            currentplayer[0]=4828

        elif(newpos<52 and self.board[newpos]):
            if(self.checkprime(newpos)):
                for i in range(6):
                    if(newpos==52 or not self.board[newpos+1]):
                        break
                    newpos+=1
            elif(self.checkperfectsquare(newpos)):
                for i in range(6):

```

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pos,
    #special case where moving back could land on original
    #so board thinks theres a marker there
    if(newpos-1!=marker and not self.board[newpos-1]):
        break
    newpos-=1
elif(self.checkhv(marker,newpos)):
    for i in range(marker+1, newpos+1):
        if(i/roll == int(i/roll)):
            if(self.board[i]):
                newpos=i
            else:
                newpos=marker
        break

    #print(newpos)
    if(newpos==52):
        self.board[marker]=True
        currentplayer[0]=4828
    elif(newpos<52):
        self.board[marker]=True
        self.board[newpos]=False
        currentplayer[0]=newpos

    currentplayer.sort()

filename = "sr.txt"
with open(filename) as file_object:
    for line in file_object:
        inputs=line.split()
        opponent = inputs[:3]
        player = inputs[3:6]
        numrolls = inputs[6]
        rolls = inputs[7:]
        diagram = patolliboard(opponent, player, numrolls, rolls)
        diagram.playgame()
        print(diagram.output())

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