

```

public boolean carPooling(int[][] trips, int capacity) {
    //your code
    int[] stations = new int[1001]; //1001 because of
    for(int i = 0; i < trips.length; i++) {
        int numPass = trips[i][1];
        int start = trips[i][0];
        int end = trips[i][2];
        stations[start] += numPass;
        stations[end] -= numPass;
    }
    for(int i = 0; i < stations.length; i++) {
        stations[i] = stations[i-1]; //prefix
    }
    for(int i = 0; i < stations.length; i++) {
        if(stations[i] > capacity) return false;
    }
    return true;
}

```

$cap = 5$
 $\left[\begin{matrix} 2, 1, 5 \\ 3, 3, 7 \end{matrix} \right]$

$\left[\begin{matrix} 0 & 2 & 2 & 5 & 5 & 3 & 3 & 0 & 7 \end{matrix} \right]$

1 2 3 4 5 6 7 8 9 10 11 12

0 1 2 3 4 5 6 7 8 9 10 11 12

1 2 3 4 5 6 7 8 9 10 11 12

2 3 4 5 6 7 8 9 10 11 12

3 4 5 6 7 8 9 10 11 12

4 5 6 7 8 9 10 11 12

5 6 7 8 9 10 11 12

6 7 8 9 10 11 12

7 8 9 10 11 12

8 9 10 11 12

9 10 11 12

10 11 12

11 12

12

sum: 33, 53

3 2 1 4 2

1 2 4 2 2 1

1 1 1 2 2 2 4

1 2 2 3 4 5 6

sum(Pref)
sum(arr)
pref[0]
if(i > 0)
pref[i] = pref[i-1] + arr[i]

1 2 3 4 5 6 7 8 9 10 11 12

2 3 4 5 6 7 8 9 10 11 12

3 4 5 6 7 8 9 10 11 12

4 5 6 7 8 9 10 11 12

5 6 7 8 9 10 11 12

6 7 8 9 10 11 12

7 8 9 10 11 12

8 9 10 11 12

9 10 11 12

10 11 12

11 12

12

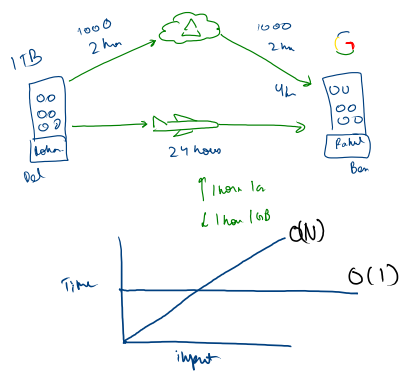
sum: 33, 53

$\left[\begin{matrix} 5 & 3 & 2 & 4 & 2 & 6 & 1 \end{matrix} \right]$
 $\xrightarrow{10^5}$
 $\begin{matrix} 1 & 2 \\ 0 & 2 \rightarrow 10 \\ 0 & 3 \rightarrow 14 \\ 2 & 4 \rightarrow 8 \\ 3 & 5 \rightarrow 12 \\ 0 & 6 \rightarrow 23 \end{matrix}$

$\left[\begin{matrix} 5 & 3 & 2 & 4 & 2 & 6 & 1 \\ 0 & 1 & 2 & 3 & 4 & 5 & 6 \end{matrix} \right]$
 $pref[i] = arr[i] + pref[i-1]$
 $\left[\begin{matrix} 5 & 8 & 10 & 14 & 16 & 22 & 23 \end{matrix} \right]$
 $sp \ 0 \ 2 \Rightarrow pref[sp] \Rightarrow 10$
 $0 \ 3 \Rightarrow pref[sp] \Rightarrow 14$
 $2 \ 4 \Rightarrow pref[sp] - pref[sp-1] = 16 - 8 = 8$
 $4 \ 6 \Rightarrow 23 - 14 = 9$

$\rightarrow pref[n]$
 $pref[0] = arr[0]$
 $for(i = 1; i < n; i++)$
 $\{$
 $\quad pref[i] = arr[i] + pref[i-1]$
 $\}$

$\left[\begin{matrix} 0, 1 \\ 2, 5 \\ 3, 4 \end{matrix} \right]$



$\left[\begin{matrix} 0 & 1 & 2 & 3 & 4 & 5 & 6 & 7 \\ 5 & 5 & -5 & 3 & 2 & -5 & 0 & 0 \end{matrix} \right]$
 $\left[\begin{matrix} 0 & 2 & 0 & 3 & 0 & -2 & 0 & 0 \end{matrix} \right]$
 $\left[\begin{matrix} 0 & 2 & 0 & 3 & 0 & -2 & 0 & 0 \end{matrix} \right]$
 $\left[\begin{matrix} 0 & 2 & 0 & 3 & 0 & -2 & 0 & 0 \end{matrix} \right]$