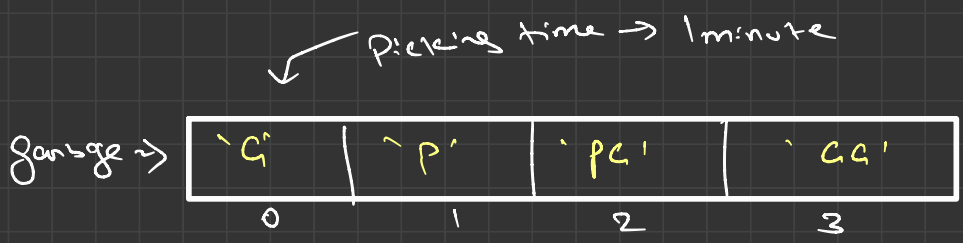
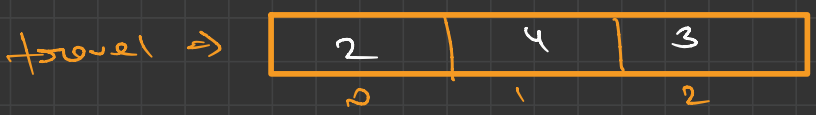
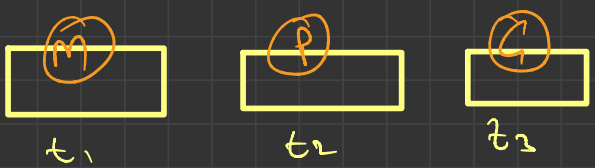




travel[i] → minutes

garbage[i] → garbage[i+1]



find minimum no. of minutes to pick all garbage ?

time — ?

↳ Pick up → 1 min

↳ truck travel time

} + ⇒ final time

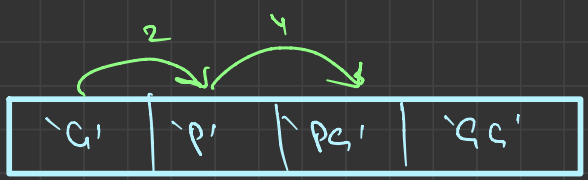
final ans = Pickup time + travel time

Paper → 2 min
Glass → 4 min
metal → 0

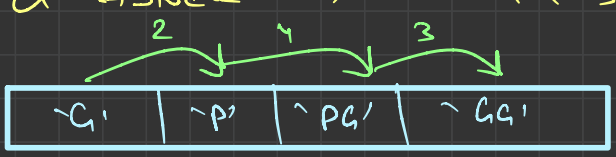
Pickup time = 2 + 4 = 6

There is no metal → metal truck not send

P truck ⇒ 2 + 4 = 6



G truck ⇒ 2 + 4 + 3 = 9

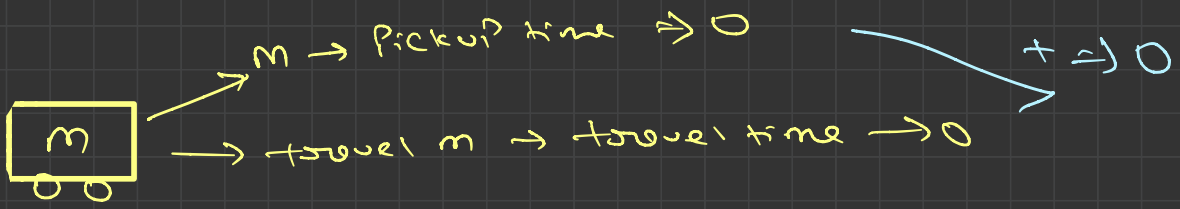


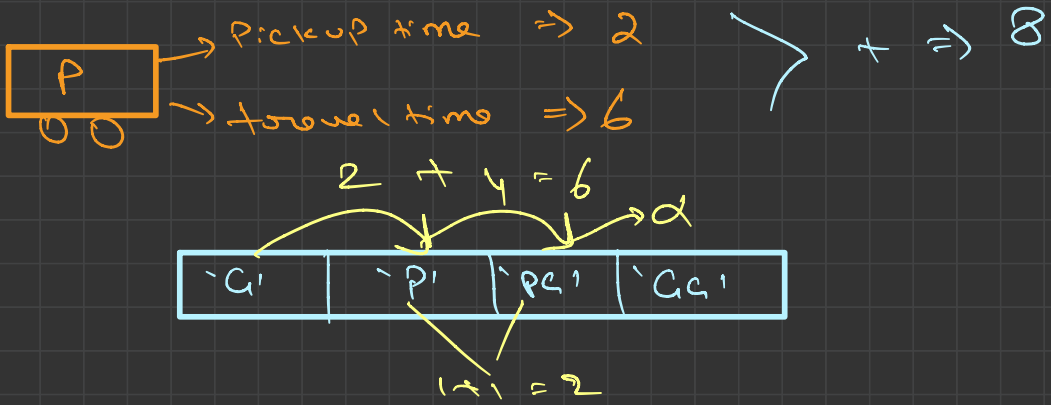
travel time ⇒ 6 + 9 ⇒ 15

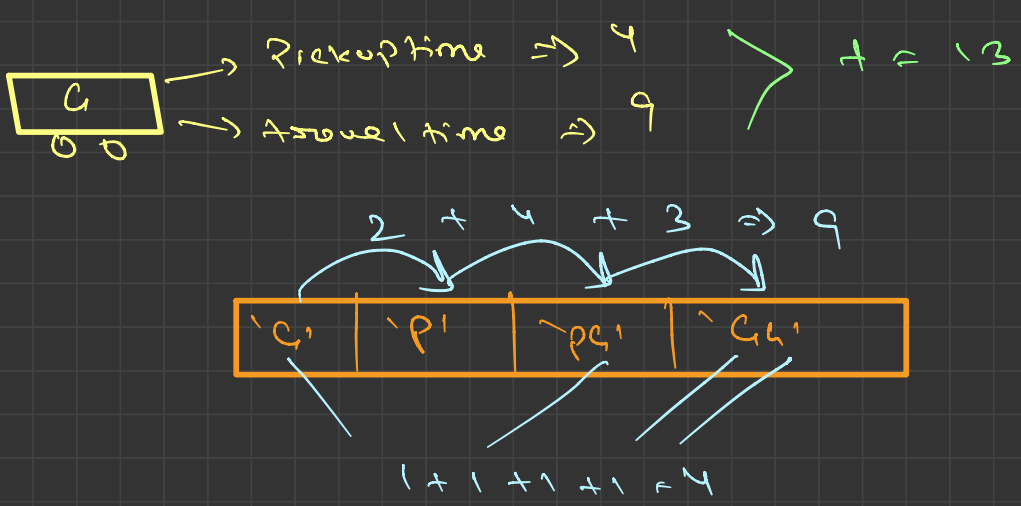
total time = 15 + 6

⇒ 21

ans

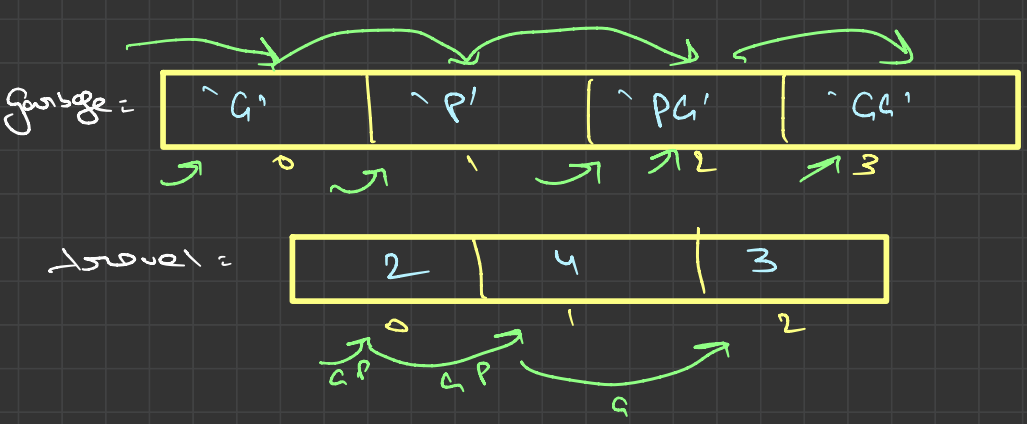






total time ⇒ 0 + 8 + 13 ⇒ 21

```cpp
class Solution {
public:
    int garbageCollection(vector<string>& garbage, vector<int>& travel) {
        // initiate pickup time of each truck -> 0
        int pickP = 0;
        int pickG = 0;
        int pickM = 0;

        // initiate travel time of each truck -> 0
        int travelP = 0;
        int travelG = 0;
        int travelM = 0;

        // initiate last index travel in garbage array -> 0 update later
        int lastP = 0;
        int lastG = 0;
        int lastM = 0;

        // calculate pickup time and travel time
        for(int i = 0; i < garbage.size(); i++){
            string curr = garbage[i];

            // there are more than one garbage in curr string
            for(int j = 0; j < curr.length(); j++){
                char ch = curr[j];

                // checking if the garbage is present not and according to the garbage we
increment the pickup time of that garbage truck

                if(ch == 'P'){
                    pickP++;
                    // update travel index
                    lastP = i; // bcoz i is the garbage index
                }
                else if(ch == 'G'){
                    pickG++;
                    // update travel index
                    lastG = i; // bcoz i is the garbage index
                }
                else if(ch == 'M'){
                    pickM++;
                    // update travel index
                    lastM = i; // bcoz i is the garbage index
                }
            }
        }

        // calculate travel time with the help of lastP, lastG, lastM
        for(int i = 0; i < lastP; i++){
            travelP += travel[i];
        }
        for(int i = 0; i < lastG; i++){
            travelG += travel[i];
        }
        for(int i = 0; i < lastM; i++){
            travelM += travel[i];
        }

        // calculate total time of each truck
        int totalP = pickP + travelP;
        int totalG = pickG + travelG;
        int totalM = pickM + travelM;

        // total ans
        int totalAns = totalP + totalG + totalM;

        return totalAns;
    }
};
```



Pick P

0 2

Travel P

2+4 = 6

0

Last P ← Index of travel

0 2

Pick G

0 2 3 4

Travel G

2+4+3 = 9

0

Last G

0 2 3

Pick M

0

↓

M truck not moved

Travel M

0

Last M

0

total ons : (2+6) + (4+9) = 21