5

1,4   2,3   5

Pick 1 2 3 4 5 6 (Not)   (1,2 ..... ∞)
      * 2 time   * one num one time

100%   6
                1,5   1,2,3   2,4   6
10%   50%   6   6   6   6

Practice ✓

                6
              1 2 3 4 5 6
            Pick   Not
          → 5,2   (6,2)

                        6 ✓
                     1   2 3 4 5 6
          2 1 2 3 4 5   1 2 3 4 5 6
           Pick Not   Pick   Not

      (3, 3456)   (5, 3456)   (4, 3456)

6 → (1, ∞
≤ Now

4

3

78

{ t u } { v w x }

t → v, w, x
u → v, w, r

$$\begin{bmatrix} tu & tw & tx \\ uv & uw & ux \end{bmatrix} \quad 6$$

1 2 3 4

al < string >

rec

2 3 7

2

3 7
ghi

tu

al < str

for

al

$$\begin{bmatrix} g\,t & g\,u \\ h\,t & h\,u \\ i\,t & i\,u \end{bmatrix}$$

rec

18

def

d

$$\begin{bmatrix} d\,g\,t & d\,g\,u \\ d\,h\,t & d\,h\,u \\ d\,i\,t & d\,i\,u \end{bmatrix}$$

6

18

dgt
dgu
dht
dhu
dit
diu

fgt
fgu
fht
fhu
fit
fiu

egt
egu
eht
ehu
eit
eiu

```java
static ArrayList<String> helper(String s) {

    if(s.length() == 1) {
        String temp = arr[s.charAt(0) - '0']; // "abc"
        ArrayList<String> allValue = new ArrayList<>();

        for(int i = 0; i < temp.length(); i++) {
            allValue.add(temp.charAt(i)+"");
        }

        return allValue;
    }

    ArrayList<String> recAns = helper(s.substring(1));

    ArrayList<String> allValue = new ArrayList<>();

    String temp = arr[s.charAt(0) - '0']; // "abc"

    for(int i = 0; i < temp.length(); i++) {

        for(int j = 0; j < recAns.size(); j++) {
            String curr = temp.charAt(i) + recAns.get(j);
            allValue.add(curr);
        }
    }

    return allValue;

}
```

arr

```
0 -> .;
1 -> abc
2 -> def
3 -> ghi
4 -> jkl
5 -> mno
6 -> pqrs
7 -> tu
8 -> vwx
9 -> yz
```
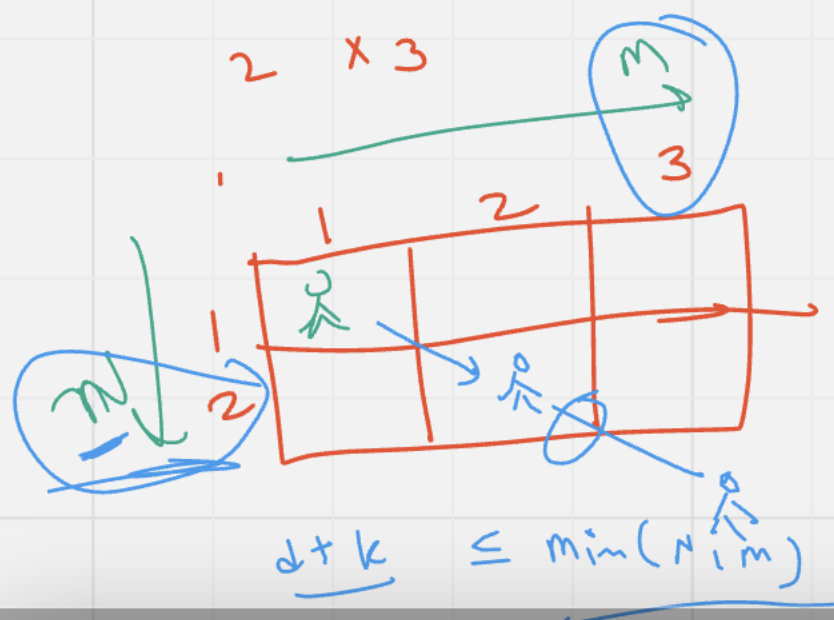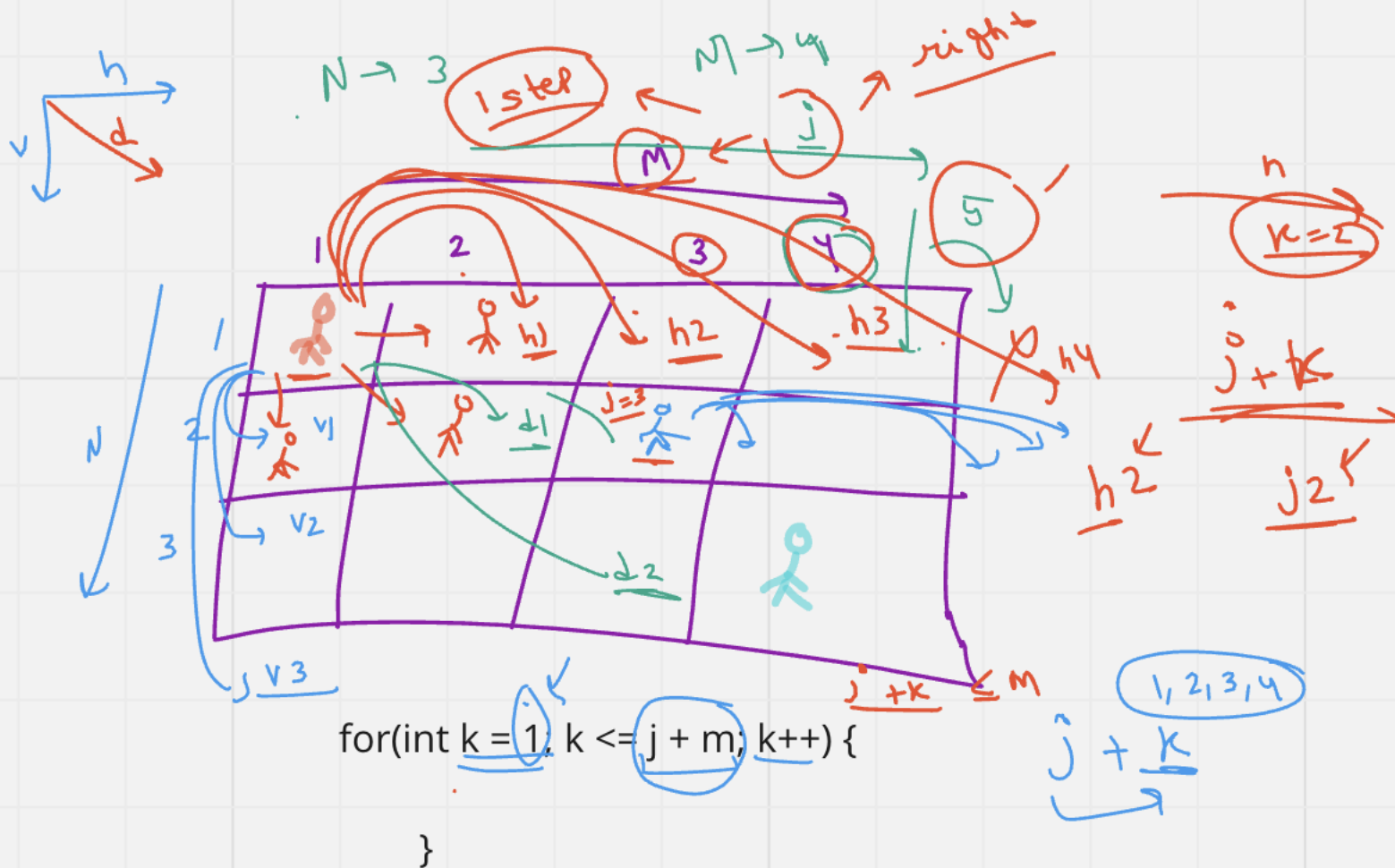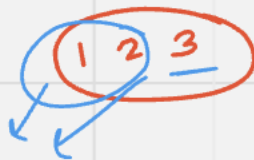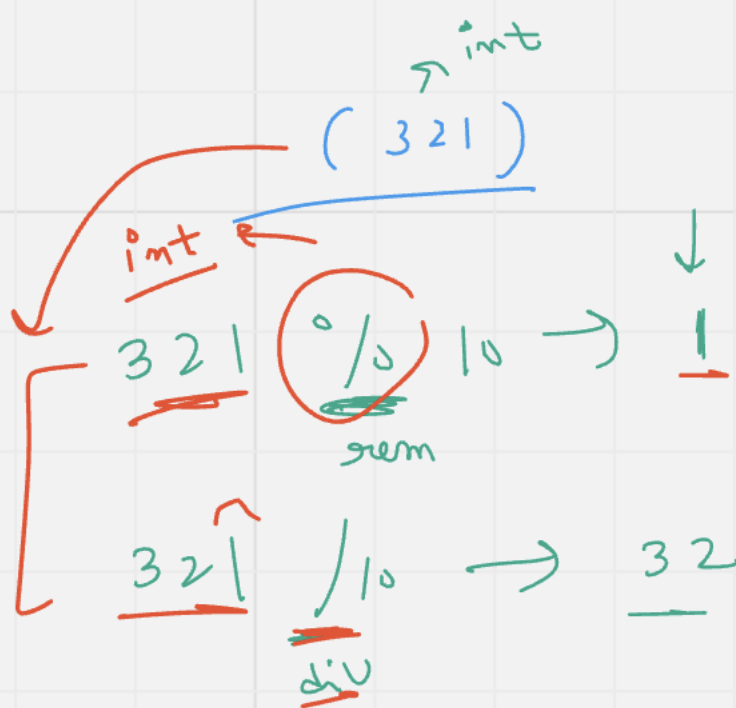
"ghi"

"g"
"h"
"i"

"def"

"3"

3

"g", "h", "i"

rec

"3"

'3' - '0' = 3

def

$$\frac{N}{2} \qquad \frac{M}{3}$$

"h"   "hh"   M
  0   1   2

"hhv"   string

h   hh → hv

h

hhv
hvh
vhh

hhv
hvh
vhh

3 Poss

if safe

→ h

↓ i j
   0, 0

is Safe

gt   [i == = N &&   j == = M]   end ✓

→ h

→ v

2 options

N, M

i

N 2

j

M 3

h v

M $m+1$

N i

"" j

1 2 3

! 1

v

2

N

i, j

i $j+1$ "h" or 1 ✓

$i+1$, j "v"

≥ 3

"" "h" "hh"

h v

h h

v

"hhv"

$i = N$ $j = m$

for(int k = 1, k <= j + m; k++) {

}

$d + k \leq min(N, M)$

(321) ↗ int

int ←

$321 \; \% \; 10 \rightarrow 1$

rem

$321 \; / 10 \rightarrow 32$

div

1 2 3

$123 \; \% \; 10 \rightarrow 3$

return $3 + 123 \; \% \; 10$

rec $=$ fun$(123 / 10)$

my → rec $+ 123 \; \% \; 10$

abc   string

$$\begin{bmatrix} abc & acb \\ bac & bca \\ cab & cba \end{bmatrix}$$

Perm

abc

bc

rec

$$\begin{bmatrix} bc \\ cb \end{bmatrix}$$

a

$$\begin{bmatrix} \_b\_c\_ \\ \uparrow \\ abc \quad bac \quad bca \end{bmatrix}$$

$$\begin{bmatrix} \_c\_b\_ \\ \uparrow \quad \uparrow \\ acb \quad cab \quad cba \end{bmatrix}$$

"abcd"

al "bcd"

arraylist

bcd   bdc
cbd   cdb
dbc   dcb

a | _ b _ c _ d _

abcd   bacd
bcad   bcda   * 24

al

cur → bcd

s → abcd

0,0 α
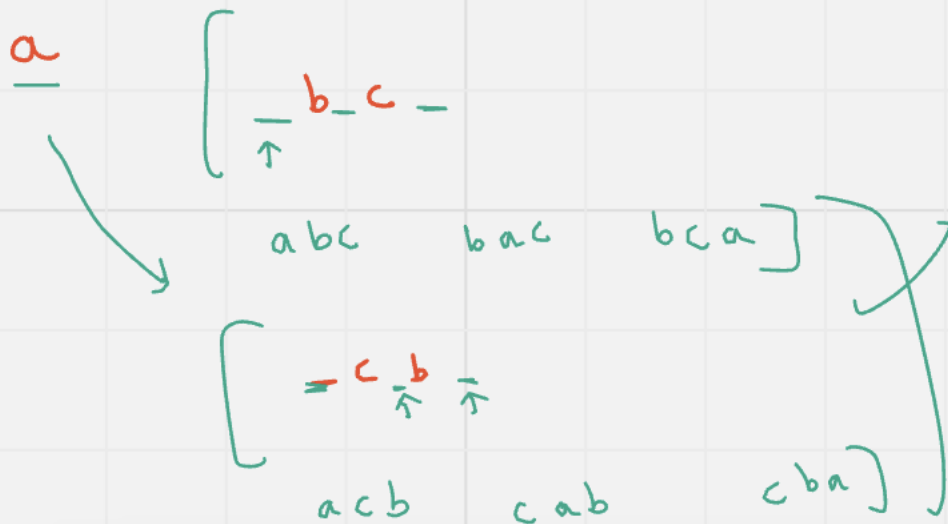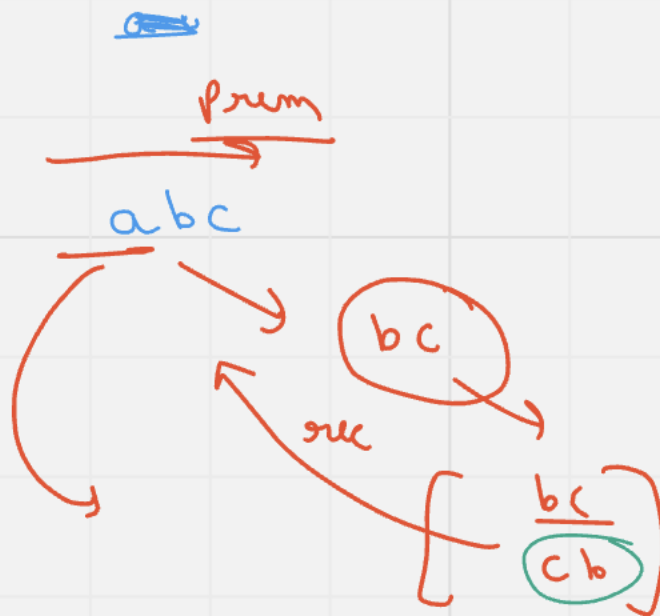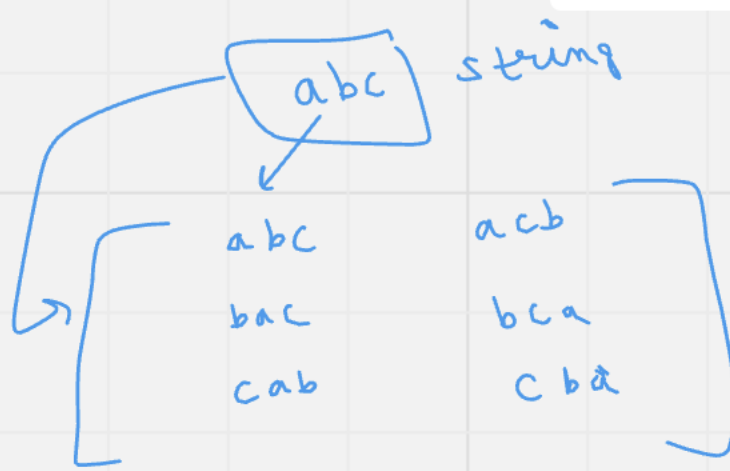
$\underline{abb}$ bab bba

abb
bab
bba
abb
bab
bba

Sort

$\overline{abb}$ abb bab bab bba bba

$-\ b\ -\ c\ -\ d\ -$

$0\ 1\ 2\ \rightarrow$

bcd

$j \rightarrow 0\ 1\ 2\ 3$

$curr.substring(0,j) + "a" + substring(j)$

$bcd + a + ""$

$\begin{array}{c} abcd \\ bacd \\ bcad \\ bcda \end{array}$