package abc;  
  
import java.io.FileInputStream;  
import java.io.FileNotFoundException;  
import java.util.Scanner;  
import java.util.prefs.BackingStoreException;  
  
public class SkyForce {  
Scanner sc = new Scanner([System.in](http://system.in/));  
int t, n, bom, ans;  
int map[][];  
int dx[] = { -1, -1, -1 };  
int dy[] = { -1, 0, 1 };  
  
void init() {  
map = new int[n + 1][5];  
ans = -1;  
bom = 1;  
}  
  
void backTrack(int x, int y, int count) {  
if (x == 0) {  
if (count > ans) {  
ans = count;  
}  
return;  
} else {  
for (int i = 0; i < 3; i++) {  
int a = x + dx[i];  
int b = y + dy[i];  
if (a >= 0 && b >= 0 && b < 5) {  
if (map[a][b] == 1) {  
backTrack(a, b, count + 1);  
} else if (map[a][b] == 0 || map[a][b] == -1) {  
backTrack(a, b, count);  
} else if (map[a][b] == 2 && bom == 1) {  
bom = 0;  
for(int h=a; h>=a-4; h--){  
if(h>=0){  
for(int k=0; k<5; k++){  
if(map[h][k] == 2){  
map[h][k] = -1;  
}  
}  
}  
}  
  
backTrack(a, b, count);  
  
for(int h=a; h>=a-4; h--){  
if(h>=0){  
for(int k=0; k<5; k++){  
if(map[h][k] == -1){  
map[h][k] = 2;  
}  
}  
}  
}  
bom = 1;  
} else if (map[a][b] == 2 && bom == 0) {  
backTrack(a, b, count-1);  
}  
}  
}  
}  
}  
  
void solution() {  
t = sc.nextInt();  
for (int tc = 1; tc <= t; tc++) {  
n = sc.nextInt();  
init();  
for (int i = 0; i < n; i++) {  
for (int j = 0; j < 5; j++) {  
map[i][j] = sc.nextInt();  
}  
}  
backTrack(n, 2, 0);  
System.out.println("Case #" + tc);  
System.out.println(ans);  
}  
}  
  
public static void main(String[] args) throws Exception {  
System.setIn(new FileInputStream("SkyForce.txt"));  
SkyForce s = new SkyForce();  
s.solution();  
}  
  
}

Sky Force=============================

package SkyForce;  
  
import java.io.FileInputStream;  
import java.util.Scanner;  
  
public class Solution {  
static int M, Ans, check;  
static int[][] Arr;  
static int[][] VS;  
static int[] dx = { -1, -1, -1 };  
static int[] dy = { 0, -1, 1 };  
  
public static void main(String[] args) throws Exception {  
System.setIn(new FileInputStream("SkyForce.txt"));  
Scanner sc = new Scanner([System.in](http://system.in/));  
int T = sc.nextInt();  
for (int t = 1; t <= T; t++) {  
M = sc.nextInt();  
Arr = new int[M + 1][5];  
VS = new int[M + 1][5];  
Ans = -1;  
for (int i = 0; i < M; i++) {  
for (int j = 0; j < 5; j++) {  
Arr[i][j] = sc.nextInt();  
}  
}  
check = 0;  
BackTrack(M, 2, 0);  
System.out.println("Case #" + t);  
System.out.println(Ans);  
  
}  
}  
  
public static void BackTrack(int x, int y, int dem) {  
if (x == 0) {  
if (dem > Ans) {  
Ans = dem;  
}  
return;  
} else {  
for (int i = 0; i < 3; i++) {  
int a = x + dx[i];  
int b = y + dy[i];  
if (a >= 0 && b >= 0 && b < 5) {  
if (Arr[a][b] == 1) {  
BackTrack(a, b, dem + 1);  
}  
if (Arr[a][b] == 0 || Arr[a][b] == -1) {  
BackTrack(a, b, dem);  
}  
if (Arr[a][b] == 2 && check == 0) {  
for (int c = a - 4; c <= a ; c++) {  
for (int d = 0; d < 5; d++) {  
if (c >= 0) {  
if (Arr[c][d] == 2) {  
Arr[c][d] = -1;  
}  
}  
}  
}  
check = 1;  
BackTrack(a, b, dem);  
for (int c = a - 4; c <= a ; c++) {  
for (int d = 0; d < 5; d++) {  
if (c >= 0) {  
if (Arr[c][d] == -1) {  
Arr[c][d] = 2;  
}  
}  
}  
}  
check = 0;  
}  
if (Arr[a][b] == 2 && check == 1) {  
BackTrack(a, b, dem - 1);  
}  
}  
}  
}  
}  
}