Qu 1) Runtime input

5 a b c d

* * *

5 a * b * c * d

a ab abc abcd

n = no of inputs

while (1 to n) of

user input

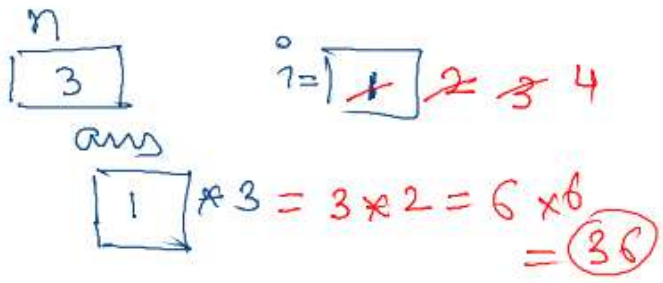
operand / multiply

sopno (—);

4 3 2 6

```
public static void main(String[] args) {
    Scanner scn = new Scanner(System.in);
    int n = scn.nextInt();

    int i =1;
    int ans =1;
    while(i<=n){
        int val = scn.nextInt();
        ans = ans * val;
        System.out.print(ans+" ");
        i++;
    }
    /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class
```



while

initialize `int i = 0;`

termination condition

```
while(i<n){
    i++;
}
```

updation

for loop

```
for(int i=0; i<n; i++){

}
```

Qu $n, n-k, n-2k, n-3k, \ldots$ (> l)

45 35 20

n, k, l

n = 50, k = 5, l = 4

i = 0 ✓ 1 2 3 4

```
while(n>l){
    n = n - k;
    Sysо(n);
    i++;
}
```

→ 50

50 − 5 = 45

45 − 5 = 40

40 − 5 = 35

50 − 5

50 − 2*5

50 − 3*5

Que Steps till 0

steps count

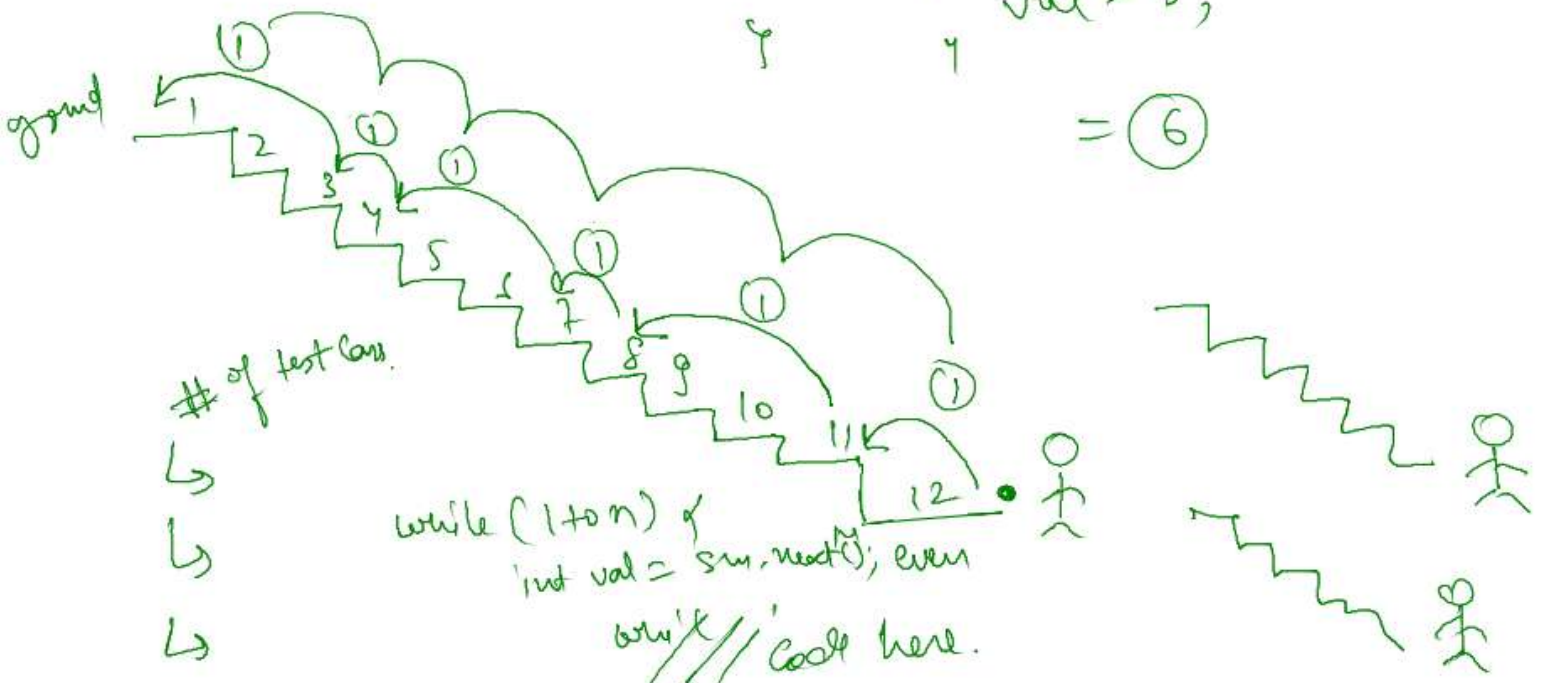
```
val = 20;

while ( val > 0) {
    if (val = even) {
        val - 1;
    }
    else {
        val - 3;
    }
}
```

19 - 3

= 16 - 1 = 15

= (6)



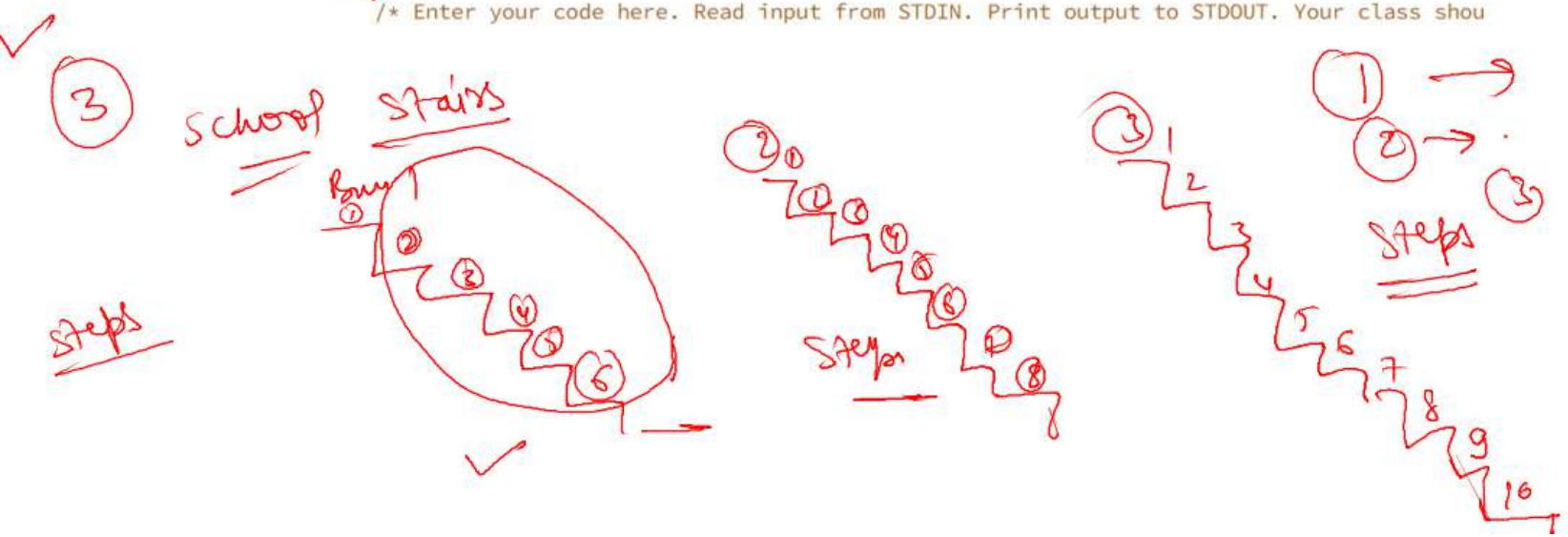
}

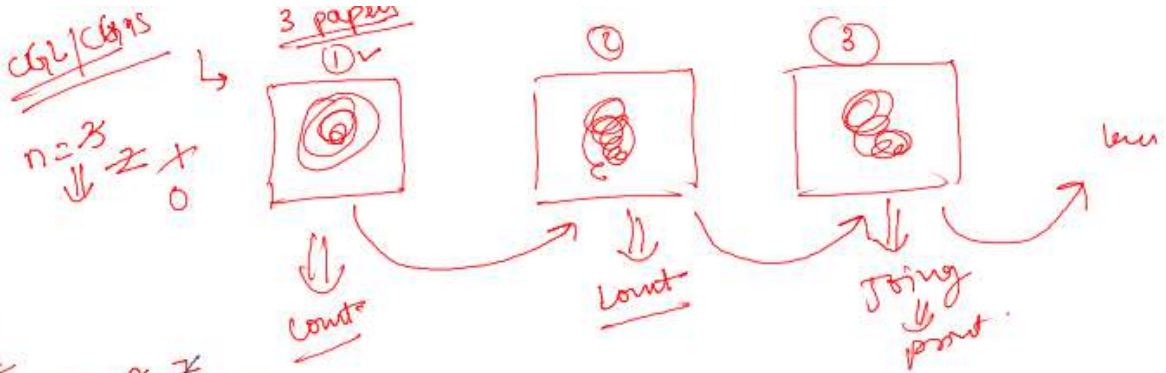
+ 1 Call

```java
public static void main(String[] args) {

    Scanner scn = new Scanner(System.in);
    int TestCases= scn.nextInt();

    while(TestCases>0){
        int val= scn.nextInt();
        int count =0;
        while(val>0){
            if(val%2==0){//even
               val -=1;
            }else{//odd
               val -=3;
            }
            count++;
        }
        System.out.println(count);
        TestCases--;
    /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class shou
```





3rd

val = 8 7 4 3 0

while(val > 0) {

if(val % 2 == 0) {//

val -= 1;

} else {

val -= 3;

}

count ++;

}

Syso(count) = 4

Count: 0 1 2 3 4

Q-

k = 3

$10^3 = 1000$

$2 * 2 * 2 = 8$

$10 \times 10 \times 10 = 1000$

```
for(int i = 1 to 3) {
    ans *= 10;
}
Syso(ans)
```

i = 0 1 2

n = 2

ans = 1 10 100

i < n

```
while(1 to 3) {
    ans *= 10;
    i++;
}
Syso(ans); 100
```

2
10

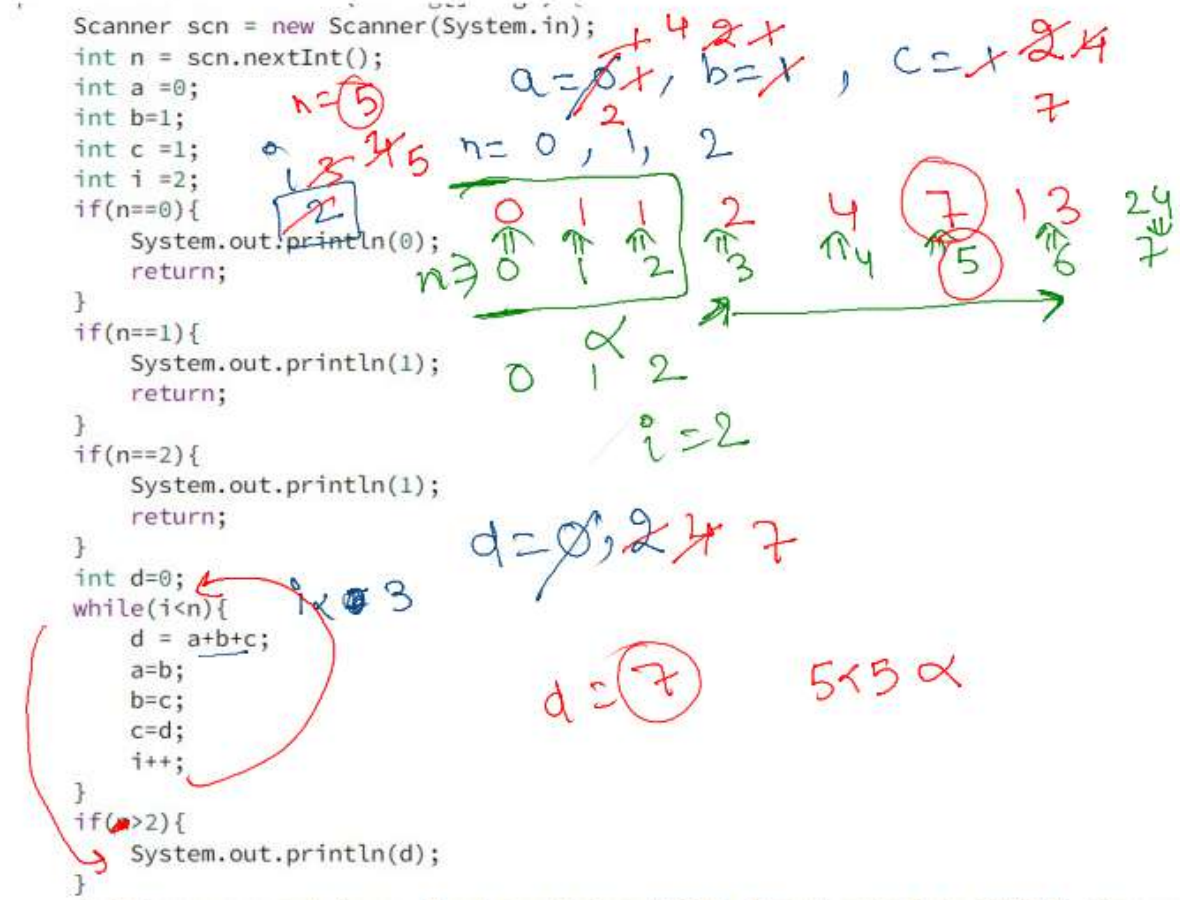
Tribonacci

a	b	c	d	d	d	d
0	1	1	2	4	7	13

```
d = a+b+c;
a = b;
b = c;
c = d;
```

return ⇒ to stop execution of that code;

```
Scanner scn = new Scanner(System.in);
int n = scn.nextInt();
int a =0;
int b=1;
int c =1;
int i =2;
if(n==0){
    System.out.println(0);
    return;
}
if(n==1){
    System.out.println(1);
    return;
}
if(n==2){
    System.out.println(1);
    return;
}
int d=0;
while(i<n){
    d = a+b+c;
    a=b;
    b=c;
    c=d;
    i++;
}
if(n>2){
    System.out.println(d);
}
```



1) print from end

n = 7654 → 765

Sol

4
5
6
7

last digit

```
while( n>0 ){
    int rem = n%10;
    syso(rem);
    n = n/10;
}
```

7654%10
rem = 4

7654/10 ⇒ 765

765/10 ⇒ 0

2) count of digits

n = 7654

count = 0 + 1 + 1 + 1 + 1

ans = 5

```
while(n>0){
    count++;
    n = n/10;
}
syso(count);
```

n>0