ANKIT PRANJAY

9361533752

ankitpranjay999@gmail.com

Q.
```
for (i=1; i<=n; i++)
    for (j=1; j<=n; j++)
        Printf ("Hi");
```

⇒
```
for (i=1; i<=n; i++)   ← n times
    for (j=1; j<=n; j++)   ← n times
```

$\therefore C \rightarrow C \cdot (n \times n)$

$\rightarrow C(n^2)$

$= O(n^2)$

if value of n is 3.

Then the "Hi" is printed 9 times.

$\because n = 3$

$\Rightarrow (n)^3 = (3)^2 = 9$

Q

```
for( i=1 ; i<=n ; i*=3)
    for (j=1 ; j<=n ; j++)
        Pf ("Hello")
```

⇒ $1 + 3 + 9 + 27 + 81 + 243 + \dots + n$

$\because$ n = upto 6 terms.

$a = 1$ {$\because a$ = first term}

$r = 3$ {$\because r$ = common ratio}

$n = 3$ {Here, n = no. of terms}.

Formulla of GP series are;

$$a\left(\frac{1-r^n}{1-r}\right)$$

$$\Rightarrow 1\left(\frac{1-3^6}{1-3}\right) \Rightarrow 1\left(\frac{1-243}{-2}\right)$$

$$\Rightarrow \frac{+242}{+2} = \underline{121}$$

$\therefore$ Hello will be printed 121 times.