Rough Work

Q4. Find Number of Iterations - 9

Solved

Using hints except Complete Solution is Penalty free now

Use Hint

Find the total number of iterations in the following code snippet:
NOTE: ^ denotes power, not Bitwise XOR.

```
for (int i = 1; i <= n; i++)
{
    for (int j = 1; j <= 3 ^ i; j++)
    {
        print(i + j);
    }
}
```

⇒

i	j	iterations
1	$[1, 3^1] = [1, 3]$	3
2	$[1, 3^2] = [1, 9]$	9
3	$[1, 3^3] = [1, 27]$	27
4	$[1, 3^4] = [1, 81]$	81
⋮	⋮	⋮
N	$[1, 3^N]$	3^N

Total Iterations:

$3 + 9 + 27 + \dots + 3^N \rightarrow$ G.P

$\rightarrow$ C.R = 3

$$S = \frac{a(1-r^N)}{(1-r)}$$

$$= \frac{3(1-3^N)}{1-3}$$

$$= \frac{3}{2}(1-3^N)$$