

```

Q. int func (int n) {
    int s = 0;
    for (int i = 1; i * i * i <= n; i++) {
        s = s + i;
    }
    return s;
}

```

⇒ The inequality is that  $i^3 \leq n$

For worst case, we consider the scenario where the number of iterations are maximum, i.e. when  $i^3 = n$

1, 2, 3 → this is how 'i' increments  
for the value of i, where  $i^3 = n$ , is the number of iterations performed

$$i^3 = n \Rightarrow i = n^{1/3}$$

∴ There will be  $n^{1/3}$  iterations in the worst case

⇒ T.C. =  $O(n^{1/3})$