1. Calculate the time complexity for the following code snippet.

```
for(int i = 0; i < n; i++) {
  for(int j = 0; j * j < n; j++) {
    cout << "PhysicsWallah ";
  }
}
```

Ans 1 : - O(n * sqrt(n)).

2. Calculate the time complexity for the following code snippet.

```
int c = 0;
for(int i = 0; i < n; i++) {
  for(int j = 1; j < n; j *= 2) {
    c++;
  }
}
```

Ans 2 : - O(nlogn).

3. Calculate the time complexity for the following code snippet.

```
int c = 0;
for(int i = 0; i < n; i++) {
  for(int j = 1; j * j < n; j *= 2) {
    c++;
  }
```

Ans 3 : - O(logn).

4. Calculate the time complexity for the following code snippet.

```
int c = 0;
for(int i = n; i > 0; i /= 2) {
  for(int j = 0; j < i; j ++) {
    c++;
  }
}
```

Ans 4 : - O(n).

5. Calculate the time complexity for the following code snippet.

```
int c = 0;
for(int i = 1; i < n; i*=2) {
  for(int j = n; j > i; j--) {
    c++;
  }
}
```

Ans 5 : - O(logn).