PW SKILLS

JAVA T&C

Assignment Questions

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Q1. **Calculate the time complexity for the following code snippet.**

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

Q2. **Calculate the time complexity for the following code snippet.**

```
int c = 0;
for(int i = n; i > 1; i /= i) {
 c++;
}
```

Q3. **Calculate the time complexity for the following code snippet where k is some constant (k<<n).**

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

Q4. **Calculate the time complexity for the following code snippet.**

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

Q5. **Calculate the time complexity for the following code snippet. Here k is some constant value less than n which is not equal to 1.**

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

Q6. **Calculate the time complexity for the following code snippet.**

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

Q7. **Calculate the time complexity for the following code snippet.**

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

Q8. **Calculate the time complexity for the following code snippet.**

```
for(int i = 0; i < n; i++) {
 for(int j = 0; j * j < n; j++) {
  System.out.print("PhysicsWallah ");
     }
}
```

Q9. **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++;
}
}
```

Q10. **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++;
}
}
```

Q11. **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++;
}
}
```

Q12. **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++;
}
}
```

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THANK YOU !

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