

What is the time complexity of the following functions in big-O notation? You do not need to justify your answers.

```
void mystery1(int n){
    for (int i=0; i<n; i++)
        for (int j=0; j<n; j++)
            cout << i << " " << j << endl;
    if (n>0)
        mystery1(n-1);
}
```

```
void mystery2(int n){
    for (int i=0; i<n; i++)
        cout << i << endl;
    if (n>1)
        mystery2(n/2);
}
```

```
void mystery3(int n){
    cout << n << endl;
    if (n>1)
        mystery3(n/2);
}
```

```
void mystery4(int n){
    cout << n << endl;
    if (n>1){
        mystery4(n/2);
        mystery4(n/2);
    }
}
```

```
void mystery5(int n){
    for (int i=0; i<n; i++)
        cout << i << endl;
    if (n>1){
        mystery5(n/2);
        mystery5(n/2);
    }
}
```

```
void mystery6(int n){
    for (int i=0; i<n; i++)
```

```
        for (int j=0; j<n; j++)
            cout << i << " " << j << endl;
    if (n>1){
        mystery6(n/2);
        mystery6(n/2);
    }
}
```