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Pledge: I pledge my honor that I have abided by the Stevens Honor System.

Give the complexity of the following functions. Choose the most appropriate notation from among O, θ, and Ω.

1.
```
void function1(int n) {
    for (int i = 1; i <= n; i++) {
        for (int j = i; j <= n; j++) {
            cout << "*";
        }
    }
}
```
Answer: $\theta(n^2)$

2.
```
void function2(int n) {
    int count = 0;
    for (int i = 1; i * i <= n; i++) {
        count++;
    }
    cout << count;
}
```
Answer: $O(n)$

3.
```
void function3(int n) {
    int count = 0;
    for (int i = n/2; i <= n; i++) {
        for (int j = 1; j + n/2 <= n; j++) {
            for (int k = 1; k <= n; k *= 2) {
                count++;
            }
        }
    }
    cout << count;
}
```
Answer: $\theta(n^3)$

4.
```
void function4(int n) {
    int count = 0;
    for (int i = n/2; i <= n; i++) {
        for (int j = 1; j <= n; j *= 2) {
            for (int k = 1; k <= n; k *= 2) {
                count++;
            }
        }
    }
    cout << count;
}
```
Answer: $\theta(n^3)$

5.
```
void function5(int n) {
    if (n == 1) {
        return;
    }
    for (int i = 1; i <= n; i++) {
        for (int j = 1; j <= n; j++) {
            cout << "*";
            break;
        }
    }
}
```
Answer: ____ $O(n^2)$____

6.
```
void function6(int n) {
    int count = 0;
    for (int i = 1; i <= n/2; i++) {
        for (int j = 1; j <= n/3; j++) {
            for (int k = 1; k <= n/4; k++) {
                count++;
            }
        }
    }
    cout << count;
}
```
Answer: ____ $\theta(n^3)$____

7.
```
void function7(int n) {
    for (int i = 1; i <= n; i++) {
        for (int j = 1; j <= n; j += i) {
            cout << "*";
        }
    }
}
```
Answer: ____ $\theta(n^2)$____

8.
```
void function8(int n) {
    int i = 1, s = 1;
    while (s <= n) {
        i++;
        s += i;
        cout << "*";
    }
}
```
Answer: ____ $\theta(n)$____