Find Big O for the following functions: (K is constant, and N is input size)

|  |  |
| --- | --- |
| **f(n)** | **Big Oh: O(g(n))** |
| 20 | O(1) |
| 100K | O(1) |
| 3N + 2K2 | O(N) |
| N + N \* logN | O(NlogN) |
| N2 + 99N | O(N2) |
| 0.1 N2 + 99N | O(N2) |

Find Big O for the following code segments:

* + for (int i=0; i<N; i+=2) {

... ... ...

} O(N)

* + for (int i=-100; i<100; i+=1) {

... ... ...

} O(1)

* + for (int i=N-5; i<N+5; i+=1) {

... ... ...

} O(1)

* + for (int i=0; i<N; i+=2) {

... ... ...

}

for (int i=0; i<N; i+=2) {

... ... ...

} O(N)

* + for (int i=0; i<N; i+=2){

for (int j=0; j<50; j+=1) {

... ... ...

}

} O(N)

* + for (int i=0; i<N; i+=2){

for (int j=0; j<N; j+=1) {

... ... ...

}

} O(N2)

* + for (int i=0; i<N; i+=2){

for (int j=0; j<i; j+=1) {

... ... ...

}

} O(N2)