

Big-oh problems

What is the running time of each of the following examples, expressed in big-oh notation? Assume "n" is the input size to the algorithm (the amount of data the algorithm must process).

Algorithm A:

```
for (int x = 0; x < n; x++) {  
    System.out.println("Hi!");  
}
```

Algorithm B:

```
for (int x = 0; x < n; x++) {  
    for (int y = 0; y < n; y++) {  
        System.out.println("Hi!");  
    }  
}
```

Algorithm C:

```
for (int x = 0; x < n; x++) {  
    for (int y = 0; y < n; y++) {  
        for (int z = 0; z < n; z++) {  
            System.out.println("Hi!");  
        }  
    }  
}
```

Algorithm D:

```
for (int x = 0; x < 100; x++) {  
    System.out.println("Hi!");  
}
```

Algorithm E:

```
for (int x = n; x > 0; x--) {  
    System.out.println("Hi!");  
}
```

Algorithm F:

```
for (int x = 0; x < n/2; x++) {  
    System.out.println("Hi!");  
}
```

Algorithm G:

```
for (int x = 0; x < Math.log(n); x++) {  
    System.out.println("Hi!");  
}
```

Algorithm H:

```
for (int x = 0; x < n; x *= 2) {  
    System.out.println("Hi!");  
}
```