

CSC 230 Elementary Data Structures and Algorithms
Spring 2014 - Assignment 6B
Due Thursday, April 17, 2014, 5:30pm

Assignment 6B Skills

Big-Oh Analysis

Assignment 6B Background

For this assignment you will be analyzing several algorithms to determine their running-time efficiency in terms of Big-Oh.

Assignment 6B Requirements

Provide a Big-Oh analysis for each of the following code segments.

1.)

```
a = 5;
b = 3;
c = a * b;
```

2.)

```
for (i=0; i<n; i++) {
    a+=1;
}
```

3.)

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

4.)

```
for (i=0; i<n; i++) {
    for (j=0; j<n; j++) {
        a+=1;
    }
}
```

5.)

```
for (i=0; i<(n/2); i++) {
    a+=i;
}
```

6.)

```
for (i=0; i<n; i++) {
    a+=1;
}
for (j=0; j<n; j++) {
    a+=1;
}
```

7.)

```
for (i=0; i<n; i++) {  
    for (j=0; j<n; j++) {  
        a+=1;  
    }  
}  
for (k=0; k<n; k++) {  
    a+=1;  
}
```

8.)

```
for (i=0; i<n; i++) {  
    for (j=0; j<n; j++) {  
        for (k=0; k<n; k++) {  
            a+=1;  
        }  
    }  
}
```

9.)

```
if (x==2) {  
    y=3;  
} else {  
    y=0;  
}
```

10.)

```
if (x==0) {  
    y=0;  
} else {  
    for (i=0; i<n; i++) {  
        y+=1;  
    }  
}
```

Assignment 6B Submission Submit in class:

A hardcopy of your analysis. You must show all work.

Required Each submitted file should include your name and a statement that this is your own work.