

What is the run time of the following method?

Give a rounded numerical value (e.g., $O(2n+n)$) AND the final big-O notation.

```
int m0(Node hd) {  
    int n = 0;  
    for ( Node tmp=hd ; tmp!=null ; tmp=tmp.next )  
        if ( tmp.data%2==1 )  
            n++;  
    return n;  
}
```

```
class Node {  
    int data;  
    Node next;  
}
```

What is the run time of the following method?

Give a rounded numerical value (e.g., $O(2n+n)$) AND the final big-O notation.

```
int m1(Node hd) {  
    if ( hd==null )  
        return 0;  
    if ( hd.data%2==0 )  
        return 1 + m1(hd.next);  
    return m1(hd.next);  
}
```

```
class Node {  
    int data;  
    Node next;  
}
```

What is the run time of the following method?

Give a rounded numerical value (e.g., $O(2n+n)$) AND the final big-O notation.

```
int m2(String[] r) {  
    int n = r.length;  
    if ( r[0]%2==0 )  
        for ( int p=0 ; p<n*n ; p++ )  
            S.O.P(p + " ");  
    else  
        for ( int t=n-1 ; t>=0 ; t/=2 )  
            S.O.P(arr[t] + " ");  
}
```

What is the run time of the following method?

Give a rounded numerical value (e.g., $O(2n+n)$) AND the final big-O notation.

```
void m3(Cat[] c) {  
    int t=0;  
    while ( t<60 ) {  
        S.O.P("fish");  
        t++;  
    }  
}
```

What is the complexity of the following function?

Show your work to a PL/IA/TA before answering this question in the survey.

$$T(n) = T(n/6) + c$$

Trace the execution call. What is the final output?

Show your work to a PL/IA/TA before answering this question in the survey.



```
class Node {  
    int data;  
    Node next;  
}
```

```
int m1(Node hd) {  
    if ( hd==null )  
        return 0;  
    if ( hd.data%2==0 )  
        return 1 + m1(hd.next);  
    return m1(hd.next);  
}
```

Trace the execution call. What is the final output?

Show your work to a PL/IA/TA before answering this question in the survey.

S.O.P(m4("deified",0,6));

```
boolean m4(String str, int s, int e) {  
    if ( s>=e )  
        return true;  
    if ( str.charAt(s) == str.charAt(e) )  
        return m4(str,s+1,e-1);  
    return false;  
}
```

Trace the execution call. What is the final output?

Show your work to a PL/IA/TA before answering this question in the survey.

```
m5(2018);
```

```
void m5(int x) {  
    if ( x>0 ) {  
        m5(x/2);  
        S.O.P(x%2 + " ");  
    }  
}
```