Question Completion Status:

QUESTION 7

1 points Saved

1. What is the big O for the code below

```
public int method3(int n) {
  int sum = 0;
  for (int j = 0; j < n; j++) {
    for (int k = 0; k < n; k++) {
      for (int l = 0; l < n; l++) {
        sum += j * k / (l + 1);
      }
    }
  }
  return sum;
}
```

a. $O(n^2)$

b. O(n log n)

c. $O(n^3)$

d. O(n)

QUESTION 8

2 points Saved

1. What is the big O for the code below

```
for (int i = 0; i < n * n * n; i++) {
      System.out.println(i);
}
```

a. O(logn)

b. $O(n^3)$

c. $O(n^2)$

d. O(n)

Question Completion Status:

QUESTION 5 — 1 points — Saved

1. What is the big O for the code below

```
public int method2(int n) {
    int sum = 0;
    for (int j = 1; j <=n; j++) {
            sum += j;
    }
    return sum;
  }
}
```

n-1+1+1 => n+1

n

Sum: 2n+3

a. $O(n^2)$

b. O(1)

c. O(log n)

d. O(n)

QUESTION 6 — 6 points — Saved

Fill in the blanks with the correct frequency for every line and the total big O:

```
1 public void method5(int n) {
2     for (int i = 0; i < n; i++) {        n+1
3     System.out.println(i);               n
4 i-0=i  for (int j = i; j > 0; j--) {     Σ_{i=1}^{n} i = n(n+1)/2 => (n²+n)/2
5       i-1      System.out.println(j);    Σ_{i=1}^{n} i − Σ_{i=1}^{n} 1 => (n²+n)/2 − n = (n²+n−2n)/2 = (n²−n)/2
6           }
7     }
8     System.out.println(" Goodbye !");    1
9 }
O(  n²  )
```

Question Completion Status:

QUESTION 3 — **1 points** — Saved

1. What is the big O for the code below

```
public void method1() {

    for(int i=1;i<10;i++)
        system.out.println("For loop at "+ i);

}
```

a. O(1)

b. O(n)

c. O(log n)

d. $O(n^2)$

QUESTION 4 — **2 points** — Saved

What is the big O notation of the following function:

$$n^2 + n \log n2^n$$

$O(2^n)$

O(n log n)

$O(n^2)$

$\Theta(n^2 \log n)$

QUESTION 5 — **1 points** — Saved

1. What is the big O for the code below

```
public int method2(int n) {
```

Question Completion Status:

QUESTION 1 — **5 points** — Saved

Fill in the blanks with the correct frequency in the corresponding line:

```
1 public int method5(int n) {
2     int k = 100, sum = 0;
3     for (int i = 0; i < n; i++)                n+1
4         for (j = 1; j <= k; j++) {             100 - 1 + 1 + 1 => 101(n)
5             sum = i + j;                       100n
6         }
7     System.out.println(sum);                   1
8
9 }
```

O(n)

QUESTION 2 — **2 points** — Saved

What is the big O notation of the following function:

$$n^{\log 2} + \log n^n + n \log n!$$

- O(n log n)
- O(n log n!)
- O(n)
- O(log n)

$n + n\log n + n\log n!$

The base of the log is 2 not 10

Rule: $\log_2 2 = 1$

QUESTION 3 — **1 points** — Saved