

King Saud University
College of Computer and Information Sciences
Computer Science Department

CSC 212

Second Semester 1439-1440

Tutorial #2

Question 1: Find the total number of primitive operations and the Big Oh notation of the following methods:

a)

	Statements	S/E	Freq.	Total
1	void findProduct(int n)			
2	{			
3	int product = 1;			
4	for (int i = 0; i < 10; i = i+2)			
5	{			
6	product = product * i;			
7	}			
8	System.out.println(product);			
9	}			
	Total Operations			
	Big Oh			

b)

	Statements	S/E	Freq.	Total
1	void findNestedProduct(int n)			
2	{			
3	int product = 1;			
4	for (int i = 0; i < n; i = i + 2)			
5	{			
6	for (int j = 0; j < 6; j ++)			
7	product = product * i * j;			
8	}			
9	System.out.println(product);			
10	}			
	Total Operations			
	Big Oh			

c)

	Statements	S/E	Freq.	Total
1	void calcSum(int n)			
2	{			
3	int sum = 0;			
4	for (int i = 1; i <= n; i++)			
5	{			
6	for (int j = 1; j <= i; j++)			
7	sum = sum + 1;			
8	}			
9	System.out.println(sum);			
10	}			
	Total Operations			
	Big Oh			

Is there any other way to solve the above problem in better performance?

d)

	Statements	S/E	Freq.	Total
1	public int method4(int n)			
2	{			
3	int sum=0;			
4	for (int i = 0; i < n; i++)			
5	for (int j = n; j >= 1; j = j/2) {			
6	sum += 1;			
7	}			
8	return sum;			
9	}			
	Total Operations			
	Big Oh			