

# CS 241

## Data Organization

### Quiz 4

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# Question 1: Hexadecimal

Which of the following hexadecimal numbers is the largest?

- A 0xDEADBEEF
- B 0xFEEDFACE
- C 0xBADF00D
- D 0xDEADCODE
- E 0xFACADE

# Question 1: Hexadecimal

Which of the following hexadecimal numbers is the largest?

A 0xDEADBEEF

**B 0xFEEDFACE**

C 0xBADFOOD

D 0xDEADCODE

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## Question 2: Hex to Binary

How many ones appear in the binary representation of the hexadecimal value 0x01239ACF?

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Hex:    0        1        2        3        9        A        C        F

## Question 2: Hex to Binary

How many ones appear in the binary representation of the hexadecimal value 0x01239ACF?

Hex:	0	1	2	3	9	A	C	F
Binary:	0000	0001	0010	0011	1001	1010	1100	1111

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How many ones appear in the binary representation of the hexadecimal value 0x01239ACF?

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Binary:	0000	0001	0010	0011	1001	1010	1100	1111
Ones:	0	1	1	2	2	2	2	4

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Binary:	0000	0001	0010	0011	1001	1010	1100	1111
Ones:	0	1	1	2	2	2	2	4
Total:	14							



## Question 3: Quicksort

```
1 void quicksort(int v[],
2               int left, int right)
3 {
4     int i, last;
5     printArray(v, left, right);
6     if(left >= right) return;
7
8     swap(v, left, (left+right)/2);
9     last = left;
10    for (i = left+1; i <= right; i++)
11    {
12        if(v[i] < v[left])
13        {
14            last++;
15            swap(v, last, i);
16            printArray(v, left, right);
17        }
18    }
19    swap(v, left, last);
20    quicksort(v, left, last-1);
21    quicksort(v, last+1, right);
22 }
```

If output from line 5 is  
[75 62 33 41 24]  
what is the output the  
next time line 16 is  
reached?

A [33 62 75 24 41]

B [33 24 75 41 62]

C [33 62 24 41 75]

D [33 41 24 63 75]

E [33 24 41 62 75]

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