Here's the code that controls the robots. Where's the error?

```
static bool isCrazyMurderingRobot = false;
void interact_with_humans(void){
   if (isCrazyMurderingRobot = true)
      kill(humans);
   else
      be_nice_to(humans);
}
```

Support your answer with detailed reasoning. Be as explicit as possible.

Question 2 of 56

What will be the result of the following line of JavaScript code?

```
var result = "a" < 3;
alert(result);
```

Support your answer with detailed reasoning. Be as explicit as possible.

Question 3 of 56

What will be the output of the following lines of JavaScript code?

```
var a = 0.1;
var b = 0.2;
alert((a + b) == 0.3);
```

Support your answer with detailed reasoning. Be as explicit as possible.

Question 12 of 56

What will be the output of the following lines of JavaScript code?

```
var num = (5, 4, 88, 6, 9);
alert(num);
```

Support your answer with detailed reasoning. Be as explicit as possible.

Show word count

Question 14 of 56

What will be the output of the following lines of JavaScript code?

```
var num = -10;
alert(num.toString(2));
```

Support your answer with detailed reasoning. Be as explicit as possible.

Show word count

Question 17 of 56

Describe in words or in pseudocode (500 words or less), how will your algorithm take decisions in case of an inevitable collision between self-driving cars?

Can you treat all lives equally, assign the same value?

What if the crash is between you and a family of five? Between a Nobel Laureate and a priest? A school bus full of children and the Prime Minister of a country?

Question 21 of 56

What will be the output of the following lines of JavaScript code?

```
var result1 = 5 + 5;
alert(result1);
var result2 = 5 + "5";
alert(result2);
```

Support your answer with detailed reasoning. Be as explicit as possible.

Show word count

Question 22 of 56

In a competition, four different functions are observed. All the functions use a single for loop and within the for loop, same set of statements are executed. Consider the following for loops:

A) for(i = 0; i < n; i++)

B) for(i = 0; i < n; i += 2)

C) for(i = 1; i < n; i *= 2)

D) for(i = n; i > -1; i /= 2)

If n is the size of input(positive), which function is most efficient(if the task to be performed is not an issue)?

- ○ **A)** A
- ○ **B)** B
- ○ **C)** C
- ○ **D)** D

Clear selection

Question 24 of 56

What will be the output of the following lines of JavaScript code?

```
var count = 10;
for (var i = 0; i < count; i++){
    alert(i);
}

alert(i);
```

Support your answer with detailed reasoning. Be as explicit as possible.

Show word count

Question 35 of 56

What will be the output of the following lines of JavaScript code?

```
var num1 = 2;
var num2 = 20;
var num3 = num1-- + num2;
var num4 = num1 + num2;
alert(num3 + " , " + num4);
```

Support your answer with detailed reasoning. Be as explicit as possible.

Question 36 of 56

The minimum number of comparisons required to find the minimum and the maximum of 100 numbers is:

- ○ **A)** 148
- ○ **B)** 147
- ○ **C)** 146
- ○ **D)** 145

Clear selection

Question 37 of 56

What will be the output of following lines of JavaScript code?

```
alert(NaN == NaN);
```

Support your answer with detailed reasoning. Be as explicit as you can.

Show word count

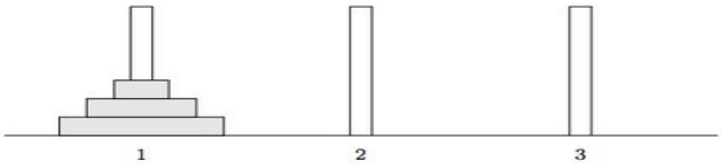
Question 38 of 56

How would you explain Recursion to your grandmother provided she is not a computer science graduate and has never written a line of code in her life?

Show word count

Question 39 of 56

The puzzle Towers of Hanoi consists of three rods, numbered 1, 2, and 3, and a number of disks of different sizes which can be slid onto any rod. Initially, all disks are stacked in rod 1, starting with the largest one on the bottom and successively smaller ones on top. This figure illustrates the puzzle with 3 disks.



The objective of the puzzle is to move the entire stack of disks to rod 2, by moving one disk from one rod to another rod at a time and never placing a larger disk on top of a smaller one.

Assume that there is a procedure *move(i, j)* that moves the top disk from rod *i*, and place it on rod *j*. Write an algorithm in pseudocode that solves the puzzle by calling the procedure *move* until the disks are moved to rod *2*.

The algorithm should take a number of disks as a parameter. For example, if there are three disks, the algorithm may call move 7 times in the following order:

Question 46 of 56

What will be the output of the following lines of JavaScript code?

```
var num1 = 5;
var num2 = 10;
var message = "The sum of 5 and 10 is " + num1 + num2;
alert(message);
```

Support your answer with detailed reasoning. Be as explicit as possible.

Show word count

Question 15 of 56

Consider the following array "a":

3	6	2	1	4	5

Follow each of the sorting algorithms below with the array "a", and count the number of comparisons until it is sorted.
(a) Insertion sort
(b) Heapsort
(c) Quicksort, where pivots are always the left-most elements.

Follow each of the sorting algorithms again, but this time with the sorted array.

Which algorithm in your opinion performs best in which case?

Justify your answers.