QuizID: 60793 NetID: xinruiy2 Score: 1 / 4 Answer Source: PrairieLearn

{{{questionNumber}}}. Which of the following is true about arrays in C++?

A. If `a` is an array, you can use the following function: `a.length()`.
B. There are no differences between static and dynamic arrays except that dynamic arrays do not use a stack variable.
C. [Correct Answer] [Your Answer] None of the other answers are true.
D. Arrays can only be made on the stack.
E. If `a` and `b` are dynamically allocated arrays of the same size, then `*a = *b` copies the elements of array `b` into array `a`.

{{{questionNumber}}}. Consider this simple code, and assume the `puppy` class has default and copy constructors defined:

```
puppy * plantANew(puppy & orig) {
    puppy * seedling = new puppy(orig);
    return seedling;
}

int main() {
    puppy f1; puppy * f2;
    f2 = plantANew(f1);
    return 0;
}
```

How many times is the `puppy` copy constructor called in the example above?

A. [Correct Answer] One time.
B. Never, because this code has a compiler error.
C. [Your Answer] Twice.
D. Never, but the code executes with no errors.
E. Three times.

{{{questionNumber}}}. Consider the following code:

```
#include <iostream>
using namespace std;

void myfunc(int y, int *x) {
    y = y+1;
    cout << *x << endl;
    y = y+1;
    *x = y;
}

int main() {
    int z = 6;
    int *x = &z;
    myfunc(z, x);
    myfunc(z+1, x);
    return 1;
}
```

What is the result of compiling and running this code?

A. The numbers 6 and 9 are printed to the screen.
B. [Your Answer] The numbers 7 and 10 are printed to the screen.
C. This code has a compilation error.
D. [Correct Answer] The numbers 6 and 8 are printed to the screen.
E. Nothing is printed to the screen.

{{{questionNumber}}}. Consider this simple function definition.

```
int & ugly(int x) {
    return x;
}
```

Which of the following statements is true?

A. [Your Answer] This function is not ugly at all, despite its name.
B. This function is ugly because there is a type mismatch between the return value and the return type.
C. [Correct Answer] This function is ugly because it returns a value parameter by reference.
D. This function is ugly because the parameter is not `int const x`.
E. This function is ugly because the value of `x` cannot be changed.