CS 111 Basics Worksheet

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1 Questions

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

int main() {
    for (int i = 0; i < __; i++) {
        cout << i + 1 << " ";
    }
    cout << endl;
}
```

1. In the above code, what should you insert into the blank to print "1 2 3 4"

   (a) 3

   (b) 4

   (c) 5

   (d) 6

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

int main() {
    for (int i = 0; i <= __; i++) {
        cout << i + 1 << " ";
    }
    cout << endl;
}
```

2. In the above code, what should you insert into the blank to print "1 2 3 4"

   (a) 3

   (b) 4

   (c) 5

   (d) 6

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

int main() {
    srand(unsigned(time())); // used for rand()
    int x = rand() % 6 + 1; // x is a random int from 1-6
    // Start here
    if (x < 3)
    {
        cout << "Less than" << endl;
    }
    else
    {
        cout << "Greater than" << endl;
    }
}
```

3. What is the error in the above code?

4. Given an int x what value can be stored in x?

   (a) "epic"
   (b) 'g'
   (c) 42
   (d) 4.2

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

int main() {
    int x = 320;
    int y = 319;
    cout << x % 160 << endl;
    cout << y % 160 << endl;
}
```

5. What would be the output of the above code segment?

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

int main() {
    int month = 2;
    string m;
    switch (month)
    {
    case 1:
        m = "Jan";
        break;
    case 2:
        m = "Feb";
        break;
    case 3:
        m = "March";
    default:
        m = "Invalid Month";
        break;
    }
    cout << m << endl;
}
```

6. What would be the output of the above code segment?

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

int main() {
    int x = 1;
    bool stop = false;
    while (!stop) {
        x = x * 2;
        stop = (x > 8) ? true : false; // If x > 8 then exit the loop
    }
}
```

7. How many times would the above while loop run?

   (a) 2

   (b) 3

   (c) 4

   (d) 5

```cpp
struct student {
int id;
string name;
bool currentStudent;
};
```

8. Using the struct above write code to create a student with an id of 1 named John and prints out the student's name.
   int main {

   }

2 Answers

1. a, 4
2. a, 3
3. Does not account for when x = 3
4. c, 42
5. 0 then 159
6. Feb
7. 4 times
8.
```
int main() {
    student student1;
    student1.name = "John";
    student1.id = 1;
    cout << "Student name: " << student1.name << endl;
}
```