Quiz B **SOLUTIONS**

1) What will the variable `flag` equal here? **flag == true**

```
bool flag = (21 == 7*3);
```

2) What will the variable `flag` equal here?

```
bool flag = (6 + 2 < 15%5);
```

flag == false

3) What's the difference between = and == **Assignment and Equivalence**

4) What does `||` mean in an `if` statement? **OR**

5) What does `&&` mean in an `if` statement? **AND**

6) What will this print? **She has 6 cats**

```
int cats = 6;
if (cats < 12)
{
     cout << "She has " << cats << " cats.\n";
}
else if (cats < 6)
{
     cout << "She is crazy, and has " << cats << " cats.\n";
}
else
{
     cout << "She is completely crazy with " << cats << " cats.\n";
}
```

7) What will this print? (hint see question 5) **She has one cat**

```
int cats = 6;
if (cats = 1)
{
     cout << "She has one cat.\n";
}
else if (cats < 4)
{
     cout << "She has " << cats << " cats.\n";
}
```

note assignment here! `cats = 1`

```
else
{
      cout << "She is crazy, and has " << cats << " cats.\n";
}
```

8) The following code fragment is supposed to print whether the int variables value is odd or even, but it doesn't work. How can it be fixed?

```
switch (value%2)
{
    case 0:
        cout << "Even integer!" << endl;
        break;
    case 1:
        cout << "Odd integer!" << endl;
        break;
}
```

9) What will this print?

```
int i = 5;
while (i < 10)
{

    cout << "The number is " << i << endl;
    ++i;
}
```

The number is 5
The number is 6
The number is 7
The number is 8
The number is 9

10) What will this print?

```
  for (int i = 0; i < 10; i += 2)
  {
        cout << "The number is " << i << endl;
  }
```

The number is 0
The number is 2
The number is 4
The number is 6
The number is 8

11) What will this print?

```
for (int i = 0; i < 6; ++i)
{
    cout << "The number is " << i << endl;
    if (i == 3)
    {
        break;
    }
}
```

The number is 0
The number is 1
The number is 2
The number is 3

12) What will this print?

```
for (int i = 0; i < 6; ++i)
{
      if (i == 3)
      {
            continue;
      }
      cout << "The number is " << i << endl;
}
```

The number is 0
The number is 1
The number is 2
The number is 4
The number is 5

13) Assuming the `#include <cmath>` library is in use, what will this print?

```
float fl = 66.6;
cout << floor(fl) << endl;
cout << round(fl) << endl;
```

66
67

14) Assuming the `#include <cmath>` library is in use, what will this print?

```
cout << pow(2, 8) << endl;
```

256

15) What does this `foobar()` function do?

converts to lower-case

```
char foobar(char foo)
{
    if (foo > 'Z')
    {
        int bar = ('a' - 'A');
        foo = foo - bar;
    }

    return foo;
}
```

16) What does this `barfoo()` function do?

returns larger value

```
int barfoo(int foo, int bar)
{
    if (foo > bar)
    {
        return foo;
    }
    return bar;
}
```

17) What will the two `cout` statements (shown in **bold**) in this program print?

```
int gThing = 5;

void myfunction(int j)
{
    j = j + gThing;
    cout << "j: " << j << endl;                    j: 13
}

int main()
{
    int i = 8;
    myfunction(i);
    cout << "i: " << i << endl;                    i: 8

    return 0;
}
```

18) **3 pts**. Write a C++ program that will print a multiplication table in the following form:

```
1
2     4
3     6     9
4     8     12    16
    .
    .
    .
10    20    30    ...
```

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

int main() {
    const int SIZE = 10;

    // Two loops traversing table using vars i & j
    for (int i = 1;  i <= SIZE; ++i) {
        for (int j = 1; j <= i; ++j)
        {
            cout << (i*j) << "\t";
        }
        cout << endl;
    }

    return 0;
}
```