CSCI 001 Lab 5d - Code Segments   Name _____

Trace the following code segments by hand. In the provided area, write the display exactly as it will appear.

1. What is the output?

```
int upperBound = 20;

for (int i = 0; i <= upperBound; i++) {

        if (i % 5 == 0)
                cout << "When i = " << i << " and i^2 = " << i*i << endl;
}
```

Output:

2. What is the output?

```
for (int j = 5; j > 0; j--) {

        cout << "j = " << j << " and j^2 = " << pow(-1.0, j) << endl;

}
```

Output:

3. What is the output? (Hint: watch for new line breaks or lack of them.)

```
int m = 5, n = 3;

for (int i = 0; i < m; i++) {

        cout << "row " << i << " : ";

        for (int j = 0; j < n; j++) {
                cout << j << " * ";
        }
        cout << endl;

}
```

Output:

4. What is the output?

```cpp
int x = 50;
int tempX = x;

cout << "Begin with x = " << x << endl;
cout << "Begin with tempX = " << tempX << endl;

do {
        cout << convertToBool(tempX) << " * ";
        tempX = tempX / 2;
} while (tempX > 0);

cout << "\nEnd with x = " << x << endl;
cout << "End with tempX = " << tempX << endl;
```

Output:

5. What is the output? (Program Logic Practice.)

```cpp
int i = 2, j = 2, k = 3, m = 2;

cout << "Answer = ";

cout << (i == 1);
cout << (j == 3);
cout << (i >= 1 && j < 4);
cout << (m <= 99 && k < m);
cout << (j >= i || k == m);
cout << (k + m < j || 3 - j >= k);
cout << !m;
cout << !(j - m);
cout << !(k > m);

cout << "\nTaco Time!"<< endl;
```

Output: