NAME: _____

```
int i = 1;
while (i < 32) {
    cout << i - 1 << " ";
    i = 2 * i;
}
```

Figure 1

1) When the code in Figure 1 runs, what does it output to the console? (20 points)

```
int n = 1;
int k = n++ * 2;
cout << ++n * 7 + k;
```

Figure 2

2) When the code in Figure 2 runs, what does it output to the console? (20 points)

3) Suppose that *t* is an integer variable. Write code that prints "cold" when *t* is less than or equal to 40, “cool” when t is greater than 40 and less than or equal to 60, “warm” when t is greater than 60 and less than or equal to 80, and “hot” when t is greater than 80. (20 points)

```
int k = 23;
int n = 10;
for (int i = 0; i < k; ++i) {
    n = n + 1;
}
cout << n + 2;
```

Figure 3

4) When the code in Figure 3 runs, what does it print? (20 points)

```
int i = 5;
while (i <= 405) {
    i = i + 200;
}
cout << i;
```

Figure 4

5) When the code in Figure 4 runs, what does it output to the console? (20 points)

```
int i = 1;
int j = 2;
double x = 1.0;
cout << i / j << endl;
cout << x / j << endl;
```

Figure 5

6) When the code in Figure 5 runs, what does it output to the console? (20 points)

```
int i = 4;
for (int k = 0; k < 300; ++k) {
    i = i + 3;
}
cout << i;
```

Figure 6

7) When the code in Figure 6 runs, what does it output to the console? (20 points)

8) Write code that prints 300 random integers that are less than 2000. (20 points)

9) Write code that computes the sum of integers 100 through n, inclusive, where n is an integer strictly greater than 100. (20 points)

10) Describe the Unix command *ls*. (5 points)

11) Show the Unix command to change the current directory to a temp folder within your current directory. (5 points)

12) Show the Unix command to delete a file named main.cpp from within the lab1 folder within your current directory. (5 points)

13) Describe the Unix command *rmdir*. (5 points)