NAME: _____

```
int i = 1;
while (i < 64) {
    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++ * 3;
cout << (++n * 9 + k) % 4;
```

Figure 2

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

3) Suppose that *g* is an integer variable. Write code that prints "pass" when *g* is greater than or equal to 60 and "fail" when g is strictly less than 60. (20 points)

```
int k = 93;
int n = 0;
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 <= 695) {
    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 > 0) << endl;
cout << (x / j > 0) << 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)

```
int i = 2;
int k = 7;
while (i < 214) {
    k = k - 3;
    i = i * 2;
}
cout << k;
```

Figure 7

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

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

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