**Assignment 3.60**

1. **Which registers hold program values x, n, result, and mask?**

x 🡪 %rdi

n 🡪 %eax

result 🡪 %rax

mask 🡪 %rdx

1. **What are the initial values of result and mask?**

long result = 0;

long mask = 1;

1. **What is the test condition for mask?**

mask != 0;

1. **How does mask get updated?**

mask <<= n;

1. **How does result get updated?**

result |= x & mask;

1. **Fill in all the missing parts of the C code.**

long loop(long x, int n) {

long result = 0;

long mask;

for (mask = 1; mask != 0; mask <<= n) {

result |= (x & mask);

}

return result;

}