(3.60)

A) x is in rdi, n is in esi and ecx, result is in rax, and mask is in edx.
B) The initial value of result is 0 and the initial value of mask is 1.
C) The test condition is that mask is non-zero.
D) Mask is left-shifted by n.
E) Resulted is ored with the x masked with mask.

```
long loop(long x, long n) {
    long result = _0_;
    long mask;
    for (mask = _1_; mask _!= 0_; mask = _mask << n_) {
        result |= _mask & x_;
    }
    return result;
}
```

(3.63)

```
long switch_prob(long x, long n) {
    long result = x;
    switch (n) {
        case 60:
        case 62:
            result = 8*x;
            break;
        case 63:
            result = x >> 3;
            break;
        case 64:
            /*
             the following code translated directly from assembly
 is equivalent to multiplying x by 15:
                result = x;
                result = result << 4;
                result -= x;
             */
            result = 15*x;
            x = result;
        case 65:
            x *= x;
        default:
            result = x + 75;
    }
    return result;
}
```