16.216: ECE Application Programming
Fall 2013

Lecture 16: Key Questions
October 11, 2013

1. **Example:** What does the following print?

```c
int f(int *a, int *b);

int main() {
    int x = 1;
    int y = 2;
    int result1, result2, result3;
    result1 = f(&x, &y);
    result2 = f(&y, &result1);
    result3 = f(&result1, &result2);
    printf("x = %d, y = %d\n", x, y);
    printf("Result 1: %d\n", result1);
    printf("Result 2: %d\n", result2);
    printf("Result 3: %d\n", result3);
    return 0;
}

int f(int *a, int *b)
{
    int copyB = *b;
    while (*a > 1) {
        *b += copyB;
        (*a)--;
    }
    return *b;
}
```

2. Write a function that:
    - Given two integer arguments, `x` and `y`, store the quotient and remainder of `x / y` into locations specified by arguments `q` and `r`, respectively.

    - Uses pointers to swap the values of two double-precision variables