

Problem 1

Here is a revised version of the function:

```
void prefixSum(float a[], float p[], long int n){
    long int i;
    /* last_val holds p[i-1]; val holds p[i] */
    float last_val, val;
    last_val = p[0] = a[0];
    for(i = 1; i < n; i++){
        val = last_val + a[i];
        p[i] = val;
        last_val = val;
    }
}
```

Problem 2

$$Speedup_{overall} = \frac{1}{0.6 + \frac{0.4}{10}} = \frac{1}{0.64} \approx 1.56$$

Problem 3

- 1) `foo(a+1, a, 499):` CPE = 1
 `foo(a, a+1, 499):` CPE = 6
- 2) `foo(a+1, a, 499):` CPE = 1
 `foo(a, a+1, 499):` CPE = 40

Problem 4

```
void test( ){
    int x = 1, y = 2;
    int a[100];
    for(int i = 0; i < 100; i+=2)
    {
        a[i] = x;
        a[i+1] = y;
    }
}
```