

```

// Optimized from 5.12 solution
void prefixsum(float a[], float p[], long n)
{
    long i;
    /* last_val holds p[i - 1], val holds p[i] */
    // need to initialize
    float last_val = 0;
    float val = 0;

    // (n - 2) to avoid going out of bounds
    for (i = 0; i < n - 2; i+=2)
    {
        // 1st
        val = last_val + a[i];
        p[i] = val;
        last_val = val;

        // 2nd
        val = last_val + a[i + 1];
        p[i + 1] = val;
        last_val = val;
    }

    // Need to deal w/ last numbers if they exist!
    for (; i < n; i++)
    {
        val = last_val + a[i];
        p[i] = val;
        last_val = val;
    }
}

```