## Homework 2 Report

## Yige Hu and Zhiting Zhu

## 1 P1

```
1: step = ceil(log_2(n))
2: temp = n >> 1
3: offset = 1
4: parfor i = 1 : n - 1 do
      x(i) = b(i)
6: end parfor
7: parfor i = 0 : n/2 - 1 do
      indx2 = offset * (2 * i + 2) - 1
8:
      indx1 = offset * (2 * i + 1) - 1
9:
10:
      x(indx2) = a(indx2) * a(indx2-1) * \dots * a(indx1+1) * x(indx1) + x(indx2)
      offset* = 2
11:
12:
      temp = temp >> 1
13: end parfor
14: temp = 2
15: offset >>= 1
16: parfor i = 1 : n/2 - 1 do
      offset >>= 1
17:
      if i < temp then
18:
          indx2 = offset * (2 * i + 1) - 1
19:
          indx1 = offset*2*i-1
20:
          x(indx2) = a(indx2)*a(indx2-1)*\dots*a(indx1+1)*x(indx1) + \\
21:
   x(indx2)
          temp* = 2
22:
      end if
23:
24: end parfor
```

- 2 P2
- 3 P3