

# 1

## 1.1 a

Each iteration is reliant on the previous one. So  $a[i]$  needs  $a[i-1]$  to be defined to be calculated.

## 1.2 b

$a[i]$  holds the summation of 1 to  $i$ . This can also be calculated as  $\frac{n(n+1)}{2}$

# 2

This program gets significantly faster as more workers are added. This can especially be seen on large inputs.

This follows the stencil pattern.

# 3

The number of threads reduces the total runtime of the program, especially on larger inputs.