Problem 1

Its ideal to declare a constant variable when the variable is not going to and should not be changed after declaration. Like a constant like pi, or a constant value which is assigned before and not likely to be changed when the program is running, so it can prevent the programmer unexpectedly change the value of the variable.

Problem 2

(1)

Let indexes of vector A of n numbers be 0 to n-1

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Given a vector A of n numbers:
for i from 0 to n − 2
      find the larger between Ai and A(i+1)
      put the larger one at A(i+1)
output A(n-1)
```

(2)

```
Given a vector A of 10 numbers:
Let Max be A0
for i from 1 to n-1
      if Ai is greater than Max
            Let Max be Ai
output Max
```

(3)

```
Given a vector A of n integers:
let Max be 0
for i from 0 to n-1
      if Ai is positive
            add 1 to Max
      else
            let Max be 0
output Max
```