1 Question E2.2

- Example 1:

  input : v = [1, 2, 1, 5, 2], n = 2
  output : The new vector is: [-1, 1, -1, -1, 1]

- Example 2:

  input : v = [1, 2], n = 3
  output : The new vector is: [-1, -1]

- Example 3:

  input : v = [5, 5, 5, 5, 5], n = 5
  output : The new vector is: [1, 1, 1, 1, 1]

2 Question E2.3

- Example 1:

  input : w = [2, 1, 30], x = [3, 4]
  output : The sign dot is 1

- Example 2:

  input : w = [50, 10, 20], x = [-4, -6]
  output : The sign dot is -1

- Example 3:

  input : w = [1, 2, 3], x = [-3, -2]
  output : The new vector is: [1, 1, 1, 1, 1]

3 Question E2.4

- Example 1:

  input : v = [0, 1, 2, 1], m = 3
  ```
              [[1.  0.  0.  0.]
               [0.  1.  0.  1.]
  ```
  output :   [0. 0. 1. 0.]]

- Example 2:

  input : v = [3, 3, 1, 1], m = 4
  ```
              [[0.  0.  0.  0.]
               [0.  0.  1.  1.]
               [0.  0.  0.  0.]
  ```
  output :   [1. 1. 0. 0.]]

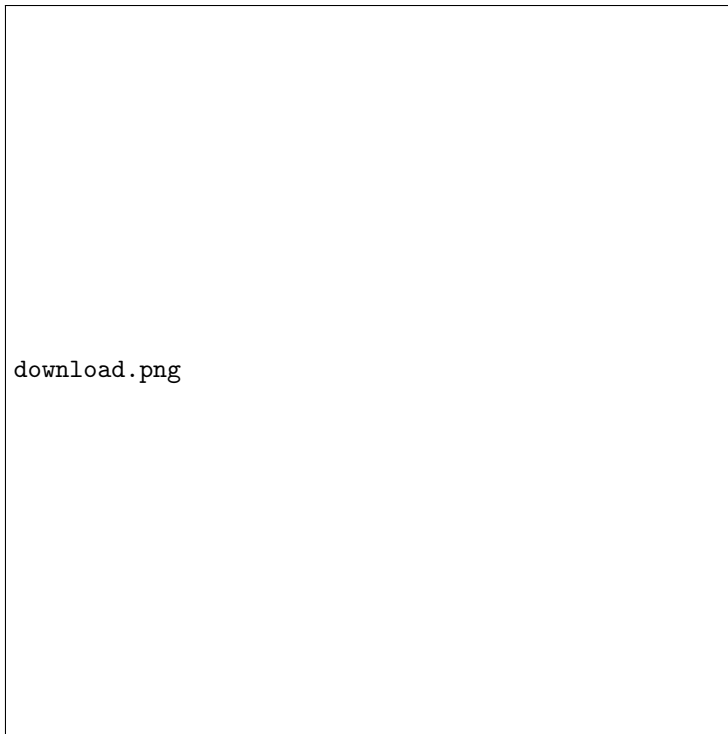- Example 3:

```
input : v = [3, 3, 1, 1, 0, 0, 1, 2, 3], m = 4
        [[0.  0.  0.  0.  1.  1.  0.  0.  0.]
         [0.  0.  1.  1.  0.  0.  1.  0.  0.]
         [0.  0.  0.  0.  0.  0.  0.  1.  0.]
output :  [1.  1.  0.  0.  0.  0.  0.  0.  1.]]
```

4   Question E2.4

output : (first part)

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output : (second part)

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