

## Solutions

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Each answer shows the steps, then the **result**.

### 2.1

- INSERT(*w*, 1, 0): [0, 3, 6, 9]
- APPEND(*w*, 12): [0, 3, 6, 9, 12]

### 2.2

- *w* is [10, 30, 40], so *w*[3] is **40**

### 2.3

```
total ← 0
FOR EACH p IN prices
{
    total ← total + p
}
```

- *total* ← 0 before the loop
- add each element inside the loop

### 2.4

- 50 and 51 pass the test  $s \geq 50$ : **2**

### 3.1 A

- REMOVE(*list*, 2) gives [1, 3, 4]; INSERT(*list*, 3, 9) gives [1, 3, 9, 4]

### 3.2 C

- 4, 8 and 16 are multiples of 4; 15 is not

### 3.3 B

- the last index is LENGTH(*data*)

### 3.4

(a)

```
unique ← []
FOR EACH n IN names
{
    IF(NOT contains(unique, n))
    {
        APPEND(unique, n)
    }
}
```

- start with an empty list and traverse **names**
- test whether the name is **already** in **unique**

- APPEND only names not yet in it

(b)

- ["Ana", "Bo", "Cy"]

(c)

- REMOVE shifts the later elements **left**, so the traversal can **skip** an element
- the original list is kept unchanged, which is safer if other code still needs it