AP Computer Science Principles
Ticket Out the Door
Set 32: Traversing Arrays

Name _____ Period _____

Skill 32.01 Exercise 1

The image below represents an array of String type variables called houses.

(a) Write code that could be used to declare and initialize the array, but does not populate it.

(b) Write the address of each house on the roof.

(c) Write code that could be used to assign the value of house 3 to "Wilma", and the value of house 6 to "Barney", and the value of house 2 to "Homer"

(d) What is the value of the house with address 4?

(e) What is the length of the array?

(f) What is the index of the last element?

Skill 32.01 Exercise 2

A new neighbor named "Wirt" has moved into the neighborhood from the previous exercise. You have no idea which house he lives in.

(a) Write a for-each loop to iterate over all the houses in the neighborhood and locate "Wirt".

(b) Write a while loop to iterate over all the houses in the neighborhood and locate "Wirt".

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Skill 32.03 Exercise 1

Refer to the code below

```
var nums = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10];
function doSomething(j){

    while(j != nums.length){
        console.log(nums[j]);
        j+=2;
    }
}
```

For each call to `doSomething`, indicate what is printed

(a) `doSomething(3);`

(b) `doSomething(2);`

(c) `doSomething(1);`

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Skill 32.04 Exercise 1

A student is creating a procedure to determine whether the weather for a particular month was considered very hot. The procedure takes as input a list containing daily high temperatures for a particular month. The procedure is intended to return true if the daily high temperature was at least 90 degrees for a majority of days in the month and return false otherwise.

```
PROCEDURE IsHot (temperatureList)
{
   total ← 0
   counter ← 0
   FOR EACH temperature IN temperatureList
   {
      IF ( < MISSING CODE A >  )
      {
         counter ← counter + 1
      }
      total ← total + 1
   }
   RETURN ( < MISSING CODE B > )
}
```

(a) Which of the following can be used to replace <MISSING CODE A> so that the procedure works as intended?

(b) Which of the following can be used to replace <MISSING CODE A> so that the procedure works as intended?

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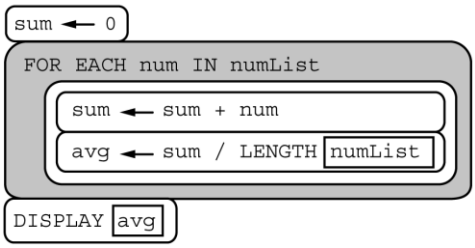
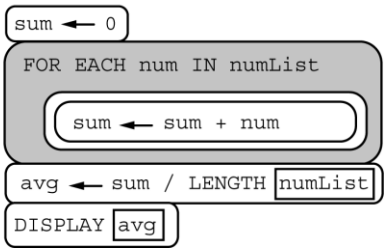
Skill 32.04 Exercise 2

The two code segments below are each intended to display the average of the numbers in the list numList. Assume that numList contains more than one value.

Program I:



Program II:

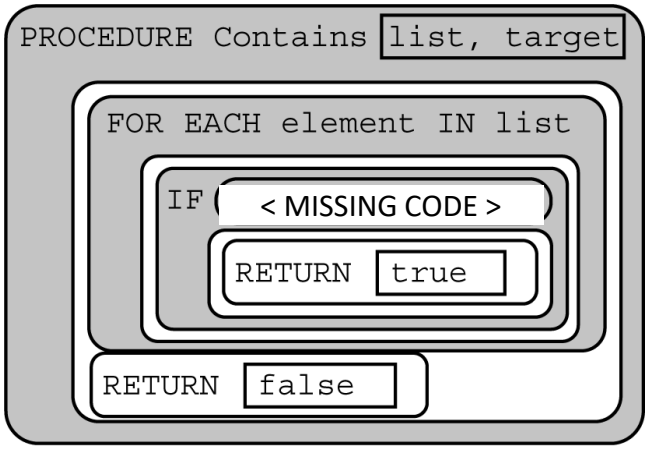


Which of the following is true?

(a) Code segment I displays the correct average, but code segment II does not.
(b) Code segment II displays the correct average, but code segment I does not.
(c) Both code segments display the correct average, but code segment I requires more arithmetic operations than code segment II.
(d) Both code segments display the correct average, but code segment II requires more arithmetic operations than code segment I.

Skill 32.04 Exercise 3

The procedure below searches for the value target in list. It returns true if target is found and returns false otherwise.



(a) What should replace < MISSING CODE > for the procedure to work as intended?

(b) Which of the following are true statements about the procedure?

I. It implements a binary search.
II. It implements a linear search.
III. It only works as intended when list is sorted.

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