**HW 7ab**

**HW\_7a**

1.) Write a program that prompts the user to enter two sides to a right triangle.

2.) Call a function named ***getSide*** to get the first side (Side A).

* Then call the same function again to get the second side (Side B).

Enter two sides of a right triangle.

Side A:

Please enter the dimension: 3.0 (getSide() function)

Side B:

Please enter the dimension: 4.0 (getSide() function)

3.) After Side A and Side B have been entered, send both sides to a function called ***calcSideC***.

* The *calcSideC* function calculates Side C and returns the value to main().
  + To calculate Side C, remember the formula: A2 + B2 = C2
  + Within the calcSideC function, the *pow()* function can be called to calculate the

square of Side A.

* + The *pow()* function can be used to calculate the square of Side B.
  + Once the square of Side A and Side B have been calculated, add them to get

the square of Side C.

* + Once C2 has been calculated, the sqrt() function can be called (still inside

the *calcSideC* function).

* + The calcSiceC function does not display anything.
  + The function returns the square root of C2, which is the length of Side C to *main().*

4.) After the value representing Side C has been returned to *main(),* from the *calcSideC* function,

call a function named ***displaySideC*** to display Side C.

The dimension of Side C is: 5.0

(OUTPUT)

Enter two sides of a right triangle.

Side A:

Please enter the dimension: 3

Side B:

Please enter the dimension: 4

The dimension of Side C is: 5.

**HW\_7b**

1.) Write a program that uses these three functions:

- getDivisor

- findNumbers

- calcSquare

* The program checks all numbers from 0 to 100, inclusively, and finds all numbers that

are evenly divisible by a number (divisor).

* Each time a number is found, the number and the square of the number are output.

(not square root)

2.) First call a function named 🡪 ***getDivisor***

- This function prompts the user for a divisor (see output below). The number is read and

returned to *main().*

Enter a divisor: 15 🡨 User enters 15

3.) Then call a function named 🡪 *findNumbers*

* The value (divisor) entered by the user is passed to the *findNumbers* function.
* Using a loop, the function begins at zero and looks at each number from 0 to 100 to

find numbers that are evenly divisible by the divisor.

* When such a number is found, a function named calcSquare is called, from within

the *findNumbers* function.

* + The number is passed as an argument to the *calcSquare* function.
  + The function calculates and returns the square of the number to

the *findNumbers* function.

* + The *findNumbers* function then outputs the number and the square of the number.

(**OUTPUT**) User enters 15

getDivisor() function

Enter a divisor: 15

Here are the numbers, from 0 to 100, that are

evenly divisible by 9, and their squares:

**findNumbers**() function

outputs the numbers and

the squares.

(but **calcSquare()** calculates

and returns the square to

**findNumbers()** ).

0 0

15 115

30 900

45 2025

60 3600

75 5625

90 8100

Numbers are aligned right.