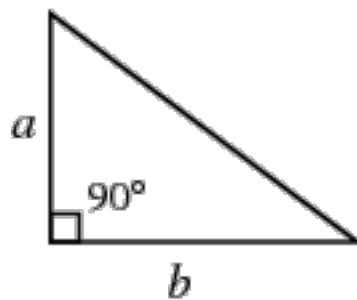


Introduction to Computing
CS110, Fall 2009
Professor Blank
Practice Sheet #1:

1. Write a Python function that converts dollars to Euros. As of this morning, **1 U.S. dollar = 0.676361177 Euros.**

```
def dollarsToEuros(dollar):  
    return 0.676361177 * dollar
```

2. Write a Python function that computes the area of a right triangle given the lengths of the two non-hypotenuse sides a and b . Hint: the area of a square that is twice as big is $a * b$.



*general right
triangle*

```
def areaOfRightTriangle(a, b):  
    return (a * b) / 2.0
```

3. Write a Python function that takes a list and speaks the items in a list. For example, here is a function that prints out the items:

```
def printList(list):  
    for i in list:  
        print i
```

```
def speakList(list):  
    for i in list:  
        speak(i)
```

4. What does the following function do:

```
def mystery(list):  
    x = 0  
    for i in list:  
        x = x + i  
    return x
```

Computes the sum of a list.

5. Write a function that finds the average of a list of numbers. Hint: the mystery function from #4 might form the basis of a starting place.

```
def average(list):  
    x = 0.0  
    count = 0  
    for i in list:  
        x = x + i  
        count = count + 1  
    return x/count
```

```
>>> average([1, 2, 3, 4, 5, 6, 7])  
4.0
```

6. Most years that are divisible by 4 are leap years. However, some exceptions to this rule are required. Years that are evenly divisible by 100 are not leap years, unless they are also evenly divisible by 400, in which case they are leap years.

Write a Python function that returns True if a given year is a leap year, and False otherwise.

```
def isLeapYear(year):  
    if year % 4 == 0:  
        if year % 100 == 0:  
            if year % 400 == 0:  
                return True  
            else:  
                return False  
        else:  
            return True  
    else:  
        return False
```

```
>>> isLeapYear(2000)  
True
```