

# Vocabulary

1. Function
  1. 函数
2. argument
  1. 实参
3. Parameter
  1. 形参
4. Call a function
  1. 调用一个函数
5. Pass a function an argument
  1. 传递给函数实参
6. Function definition
  1. 函数定义
  2.  $f(x) = 3x + 2$
  3.  $x$  is our parameter.  $x$ 是我们的形参
7. Function call
  1. 调用函数
  2.  $f(4) = 14$
  3. 4 is our argument. 4是我们的实参
8. Function notation
  1. 函数表示法
  2.  $f(x) = \dots$

## Python Functions:

### Define a Function

```
def times_two(argument):  
    return argument * 2
```

### Call a Function

```
times_two(6)
```

## Homework

Dina is an honor student by day; but by night, she works as a teacher. Each month she gets paid \$1000 base, plus an extra \$100 for each hour she teaches. Of course, she gets paid in cash – all \$20 bills.

Let  $h$  equal the number of hours Dina teaches in a given month. Let  $m$  be the amount of money she is paid that much, in dollars. Let  $b$  be the number of \$20 bills she gets.

**Use Math Notation & Then Python Notation To:**

- a. Write a function  $m(h)$  that tells how much money Dina makes, in a given month, as a function of the number of hours she teaches. \_\_\_\_\_
- b. Write a function  $b(m)$  that tells how many bills Dina gets, in a given month, as a function of the number of dollars she makes. \_\_\_\_\_
- c. Write a composite function  $b(m(k))$  that gives the number of bills Dina gets, as a function of the number of hours she teaches. \_\_\_\_\_
- d. If Dina teaches 5 hours in a month, how many \$20 bills does she earn? First, translate this question into function notation – then solve it for a number.
- e. If Dina earns 100 \$20 bills in a month, how many hours did she teach? First, translate this equation into function notation – then solve it for a number.