Your name:_____

1. Consider the code snippet shown to the right.
   (a) What is the ***type*** of the object to which the name (i.e., variable) *greeting* refers? _____
   (b) What is the ***type*** of the object to which the name (i.e., variable) ***x*** refers? _____
   (c) What is the ***value*** of ***x*** ***after*** the snippet runs? _____
   (d) What is the ***value*** of ***y*** ***after*** the snippet runs? _____
   (e) What is the ***value*** of ***z*** ***after*** the snippet runs? _____

```
greeting = "hello"
x = 27 // 5
y = 27 % 5
z = 2 ** 3
z = z + 12
z = z * 3
```

2. Consider the code snippet shown to the right. ***Underline*** the parameters and ***circle*** the arguments.

```
def main():
    a = 10
    b = 5
    print(foo(a, b))

def foo(a, b):
    return (a ** 2) + (b ** 2)
```

3. The following steps happen when calling a function. Number them in the order they occur (1, 2, 3, 4).

   ____ Run the code in the function's definition.

   ____ Jump to the function's definition, assigning the function's parameters, if any, to the arguments in the function call.

   ____ Continue code execution from where the function was called.

   ____ Return the value to where the function was called.

4. Consider the program shown to the right. In the box beside it, show what that program prints (i.e., displays) when it runs.

```
def main():
    print("hi")
    foo()
    x = bar()
    print(3 * x)
    print("bye")

def foo():
    print("ok:", bar())
    print("foo")

def bar():
    print("bar")
    return 8

main()
bar()
```

Output:

5. Consider the program shown to the right. In the box below, show what that program prints (i.e., displays) when it runs.

```
def main():
    print(foo(10, 2))
    print(foo(2, 10))

def foo(a, b):
    return (a ** 2) + 10 + b

main()
```

Output:

6. Fill in the blanks below. Besides a name, every class has what three things?

   A _____ to create and initialize instances of the class,

   _____ that do stuff, and

   _____ that store data.

7. In this problem assume that there is a name **`turtle`** that has been defined to refer to a `SimpleTurtle`.
   (a) Suppose that there is a ***method*** in the `SimpleTurtle` class called ***`forward`*** that takes the distance to move forward as a parameter. Write a statement that would make **`turtle`** move 100 pixels forward using the ***`forward`*** **method**.

   (b) Now suppose that there is a ***function*** called ***`another_forward`*** that takes a `SimpleTurtle` and the distance to move forward as its TWO parameters. Write a statement that would make **`turtle`** move 100 pixels forward using the ***`another_forward`*** **function**.

8. In the box to the right, define a function named ***`silly`*** that takes two parameters, both `SimpleTurtle` objects. The function makes the first `SimpleTurtle` move 100 pixels backward and makes the second `SimpleTurtle` turn left 60 degrees. The function returns the sum of the speeds of the two `SimpleTurtle` objects.