**Review Questions**

**Multiple Choice**

1. A group of statements that exist within a program for the purpose of performing a specific

task is a(n) \_\_\_\_\_\_\_\_\_\_.

a. block

b. parameter

c. function

d. expression

2. A design technique that helps to reduce the duplication of code within a program and

is a benefit of using functions is \_\_\_\_\_\_\_\_\_\_.

a. code reuse

b. divide and conquer

c. debugging

d. facilitation of teamwork

3. The first line of a function definition is known as the \_\_\_\_\_\_\_\_\_\_.

a. body

b. introduction

c. initialization

d. header

4. You \_\_\_\_\_\_\_\_\_\_ the function to execute it.

a. define

b. call

c. import

d. export

5. A design technique that programmers use to break down an algorithm into functions

is known as \_\_\_\_\_\_\_\_\_\_.

a. top-down design

b. code simplification

c. code refactoring

d. hierarchical subtasking

6. A \_\_\_\_\_\_\_\_\_\_ is a diagram that gives a visual representation of the relationships

between functions in a program.

a. flowchart

b. function relationship chart

c. symbol chart

d. hierarchy chart

7. A \_\_\_\_\_\_\_\_\_\_ is a variable that is created inside a function.

a. global variable

b. local variable

c. hidden variable

d. none of the above; you cannot create a variable inside a function

8. A(n) \_\_\_\_\_\_\_\_\_\_ is the part of a program in which a variable may be accessed.

a. declaration space

b. area of visibility

c. scope

d. mode

9. A(n) \_\_\_\_\_\_\_\_\_\_ is a piece of data that is sent into a function.

a. argument

b. parameter

c. header

d. packet

10. A(n) \_\_\_\_\_\_\_\_\_\_ is a special variable that receives a piece of data when a function is called.

a. argument

b. parameter

c. header

d. packet

11. A variable that is visible to every function in a program file is a \_\_\_\_\_\_\_\_\_\_.

a. local variable

b. universal variable

c. program-wide variable

d. global variable

12. When possible, you should avoid using \_\_\_\_\_\_\_\_\_\_ variables in a program.

a. local

b. global

c. reference

d. parameter

**True or False**

1. The phrase “divide and conquer” means that all of the programmers on a team should

be divided and work in isolation.

2. Functions make it easier for programmers to work in teams.

3. Function names should be as short as possible.

4. Calling a function and defining a function mean the same thing.

5. A flowchart shows the hierarchical relationships between functions in a program.

6. A hierarchy chart does not show the steps that are taken inside a function.

7. A statement in one function can access a local variable in another function.

8. In Python you cannot write functions that accept multiple arguments.

9. In Python, you can specify which parameter an argument should be passed into a function

call.

10. You cannot have both keyword arguments and non-keyword arguments in a function call.

**Short Answer**

1. How do functions help you to reuse code in a program?

2. Name and describe the two parts of a function definition.

3. When a function is executing, what happens when the end of the function block is

reached?

4. What is a local variable? What statements are able to access a local variable?

5. What is a local variable’s scope?

6. Why do global variables make a program difficult to debug?

**Algorithm Workbench**

1. Write a function named times\_ten. The function should accept an argument and display

the product of its argument multiplied times 10.

2. Examine the following function header, and then write a statement that calls the function,

passing 12 as an argument.

def show\_value(quantity):

3. Look at the following function header:

def my\_function(a, b, c):

Now look at the following call to my\_function:

my\_function(3, 2, 1)

When this call executes, what value will be assigned to a? What value will be assigned

to b? What value will be assigned to c?

4. What will the following program display?

def main():

x = 1

y = 3.4

print(x, y)

change\_us(x, y)

print(x, y)

def change\_us(a, b):

a = 0

b = 0

print(a, b)

main()

5. Look at the following function definition:

def my\_function(a, b, c):

d = (a + c) / b

print(d)

a. Write a statement that calls this function and uses keyword arguments to pass 2 into

a, 4 into b, and 6 into c.

b. What value will be displayed when the function call executes?