**Review Questions**

**Multiple Choice**

1. A \_\_\_\_\_\_\_\_\_\_ error does not prevent the program from running, but causes it to

produce incorrect results.

a. syntax

b. hardware

c. logic

d. fatal

2. A \_\_\_\_\_\_\_\_\_\_ is a single function that the program must perform in order to satisfy the

customer.

a. task

b. software requirement

c. prerequisite

d. predicate

3. A(n) \_\_\_\_\_\_\_\_\_\_ is a set of well-defined logical steps that must be taken to perform a

task.

a. logarithm

b. plan of action

c. logic schedule

d. algorithm

4. An informal language that has no syntax rules, and is not meant to be compiled or

executed is called \_\_\_\_\_\_\_\_\_\_.

a. faux code

b. pseudocode

c. Python

d. a flowchart

5. A \_\_\_\_\_\_\_\_\_\_ is a diagram that graphically depicts the steps that take place in a

program.

a. flowchart

b. step chart

c. code graph

d. program graph

6. A \_\_\_\_\_\_\_\_\_\_ is a sequence of characters.

a. char sequence

b. character collection

c. string

d. text block

7. A \_\_\_\_\_\_\_\_\_\_ is a name that references a value in the computer’s memory.

a. variable

b. register

c. RAM slot

d. byte

8. A \_\_\_\_\_\_\_\_\_\_ is any hypothetical person using a program and providing input for it.

a. designer

b. user

c. guinea pig

d. test subject

9. A string literal in Python must be enclosed in

a. parentheses

b. single-quotes

c. double-quotes

d. either single-quotes or double-quotes

10. Short notes placed in different parts of a program explaining how those parts of the

program work are called \_\_\_\_\_\_\_\_\_\_.

a. comments

b. reference manuals

c. tutorials

d. external documentation

11. A(n) \_\_\_\_\_\_\_\_\_\_ makes a variable reference a value in the computer’s memory.

a. variable declaration

b. assignment statement

c. math expression

d. string literal

12. This symbol marks the beginning of a comment in Python.

a. &

b. \*

c. \*\*

d. #

13. Which of the following statements will cause an error?

a. x = 17

b. 17 = x

c. x = 99999

d. x = '17'

14. In the expression 12 + 7, the values on the right and left of the + symbol are

called \_\_\_\_\_\_\_\_\_\_.

a. operands

b. operators

c. arguments

d. math expressions

15. This operator performs integer division.

a. //

b. %

c. \*\*

d. /

16. This is an operator that raises a number to a power.

a. %

b. \*

c. \*\*

d. /

17. This operator performs division, but instead of returning the quotient it returns the

remainder.

a. %

b. \*

c. \*\*

d. /

18. Suppose the following statement is in a program: price = 99.0. After this statement

executes, the price variable will reference a value of this data type.

a. int

b. float

c. currency

d. str

19. This built-in function can be used to read input that has been typed on the keyboard.

a. input()

b. get\_input()

c. read\_input()

d. keyboard()

20. This built-in function can be used to convert an int value to a float.

a. int\_to\_float()

b. float()

c. convert()

d. int()

**True or False**

1. Programmers must be careful not to make syntax errors when writing pseudocode

programs.

2. In a math expression, multiplication and division takes place before addition and

subtraction.

3. Variable names can have spaces in them.

4. In Python the first character of a variable name cannot be a number.

5. If you print a variable that has not been assigned a value, the number 0 will be

displayed.

**Short Answer**

1. What does a professional programmer usually do first to gain an understanding of a

problem?

2. What is pseudocode?

3. Computer programs typically perform what three steps?

4. If a math expression adds a float to an int, what will the data type of the result be?

5. What is the difference between floating-point division and integer division?

**Algorithm Workbench**

1. Write Python code that prompts the user to enter his or her height and assigns the user’s

input to a variable named height.

2. Write Python code that prompts the user to enter his or her favorite color and assigns

the user’s input to a variable named color.

3. Write assignment statements that perform the following operations with the

variables a, b, and c.

a. Adds 2 to a and assigns the result to b

b. Multiplies b times 4 and assigns the result to a

c. Divides a by 3.14 and assigns the result to b

d. Subtracts 8 from b and assigns the result to a

4. Assume the variables result, w, x, y, and z are all integers, and that w = 5, x = 4,

y = 8, and z = 2. What value will be stored in result after each of the

following statements execute?

a. result = x + y

b. result = z \* 2

c. result = y / x

d. result = y – z

e. result = w // z

5. Write a Python statement that assigns the sum of 10 and 14 to the variable total.

6. Write a Python statement that subtracts the variable down\_payment from the variable

total and assigns the result to the variable due.

7. Write a Python statement that multiplies the variable subtotal by 0.15 and assigns the

result to the variable total.

8. What would the following display?

a = 5

b = 2

c = 3

result = a + b \* c

print(result)

9. What would the following display?

num = 99

num = 5

print(num)

10. Assume the variable sales references a float value. Write a statement that displays

the value rounded to two decimal points.

11. Assume the following statement has been executed:

number = 1234567.456

Write a Python statement that displays the value referenced by the number variable formatted

as

1,234,567.5

12. What will the following statement display?

print('George', 'John', 'Paul', 'Ringo', sep='@')