

1. A computer program is a sequence of:
 1. ones and zeroes.
 2. instructions and decisions.
 3. primary and secondary storage.
 4. processors and compilers.

Title

What is a computer program?

type

mc

Section

1.1 Computer Programs

id

testbank-py-1-ch01-01

2. Computers are machines that:
 1. are imprecise and slow.
 2. design computer programs.
 3. execute programs.
 4. carry out a very narrow range of tasks.

Title

What is a computer?

type

mc

Section

1.1 Computer Programs

id

testbank-py-1-ch01-02

3. Which of the following refers to a collection of programs that a computer executes?
 1. Compiler
 2. Software
 3. Instructions
 4. Source Code

Title

What term refers to a collection of programs?

type

mc

Section

1.1 Computer Programs

id

testbank-py-2-ch01-03

from

testbank-py-1-ch01-03

4. Which parts of the computer **store** program code?

1. CPU
2. **Secondary storage**
3. Monitor
4. Keyboard

Title

Which parts of the computer store program code?

type

mc

Section

1.2 The Anatomy of a Computer

id

testbank-py-1-ch01-04

5. Which of the following items is NOT considered hardware:

1. a keyboard.
2. a speaker.
3. **a program.**
4. a microphone.

Title

What is considered hardware

type

mc

Section

1.2 The Anatomy of a Computer

id

testbank-py-1-ch01-05

6. The Central Processing Unit is primarily responsible for:

1. ensuring data persists when electrical power is turned off.
2. enabling a human user to interact with the computer.
3. interconnecting computers that are separated by distance.
4. **performing program control and data processing.**

Title

What is a CPU?

type

mc

Section

1.2 The Anatomy of a Computer

id

testbank-py-1-ch01-06

7. Computers store both data and programs not currently running in:

1. Primary storage.
2. Central processing unit.
3. **Secondary storage.**
4. Transistors.

Title
Where are programs and data stored?
type
mc
Section
1.2 The Anatomy of a Computer
id
testbank-py-1-ch01-07

8. Which of the following hardware devices is NOT considered an input device?
1. Keyboard
 2. Monitor
 3. Mouse
 4. Microphone

Title
What is considered input hardware?
type
mc
Section
1.2 The Anatomy of a Computer
id
testbank-py-1-ch01-08

9. Which of the following hardware devices is NOT considered an output device?
1. Speaker
 2. Monitor
 3. Printer
 4. Microphone

Title
What is considered output hardware?
type
mc
Section
1.2 The Anatomy of a Computer
id
testbank-py-1-ch01-09

10. When the computer begins to run a program,
1. the program is moved from secondary storage to memory.
 2. the program is moved from secondary storage to the network controller.
 3. the program is moved from the CPU to memory.
 4. the program is moved from the CPU to secondary storage.

Title
What happens when a program begins to run?
type

mc
Section
1.2 The Anatomy of a Computer
id
testbank-py-2-ch01-10
from
testbank-py-1-ch01-10

11. What part of the computer carries out arithmetic operations, such as addition, subtraction, multiplication and division?

1. CPU
2. Network
3. Primary storage
4. Secondary storage

Title
What part of the computer performs arithmetic?
type
mc
Section
1.2 The Anatomy of a Computer
id
testbank-py-2-ch01-11
from
testbank-py-1-ch01-11

12. High-level programming languages were created to:

1. Allow programmers to describe the solution to a problem one CPU instruction at a time
2. Make programming less error-prone and less tedious
3. Maximize the running time of programs
4. Translate CPU instructions into high-level instructions

Title
Why were high-level programming languages created?
type
mc
Section
1.3 The Python Programming Language
id
testbank-py-2-ch01-12
from
testbank-py-1-ch01-12

13. What are two of the most important benefits of the Python language?

1. Advanced mathematical equations and fast programs
2. Ease of use and fast programs
3. Ease of use and portability
4. Fast programs and smaller programs

Title
What are the benefits of Python?
type
mc
Section
1.3 The Python Programming Language
id
testbank-py-2-ch01-13
from
testbank-py-1-ch01-13

14. What is wrong with the following code snippet:

```
num1 = 10  
num2 = 20  
num3 = 30  
total = Num1 + Num2 + Num3
```

1. Nothing, the variable `total` will be the sum of the three numbers
2. Python is case sensitive so `Num1`, `Num2`, and `Num3` are undefined
3. `total` must be initialized to zero first
4. The numbers should be `10.0`, `20.0` and `30.0`

Title
What is wrong with the following code snippet?
type
mc
Section
1.4 Becoming Familiar with Your Programming Environment
id
testbank-py-1-ch01-14

15. An integrated development environment bundles tools for programming into a unified application. What kinds of tools are usually included?
1. A web browser
 2. An editor and an interpreter
 3. Presentation tools
 4. Source files and bytecode files

Title
What kind of tools can be found in an integrated development environment?
type
mc
Section
1.4 Becoming Familiar with Your Programming Environment
id
testbank-py-2-ch01-15
from
testbank-py-1-ch01-15

16. What is the difference between an editor and an interpreter?

1. An editor allows program files to be entered and modified; an interpreter reads and executes program files
2. An editor allows program files to be entered and modified; an interpreter produces an indexed database of terms and keywords
3. An editor allows program files to be entered and modified; an interpreter produces an organized list of files
4. An editor converts program files into an executable program; an interpreter allows program files to be entered and modified

Title

What is the difference between an editor and a compiler?

type

mc

Section

1.4 Becoming Familiar with Your Programming Environment

id

testbank-py-1-ch01-16

17. What reads Python programs and executes the program instructions?

1. editor
2. CPU
3. compiler
4. interpreter

Title

What is used to execute a Python program?

type

mc

Section

1.4 Becoming Familiar with Your Programming Environment

id

testbank-py-1-ch01-17

18. What extension is used for Python files?

1. .Python
2. .py
3. .dat
4. .txt

Title

What extension is used for Python source files?

type

mc

Section

1.4 Becoming Familiar with Your Programming Environment

id

testbank-py-1-ch01-18

19. By entering the command `python3`, the program runs in which mode?

1. interactive mode
2. print mode
3. command mode
4. backup mode

Title

What mode is invoked when the user enters "python" at the command prompt?

type

mc

Section

1.4 Becoming Familiar with Your Programming Environment

id

testbank-py-1-ch01-19

20. The Python compiler reads the file containing your source code and converts it to:

1. machine code
2. assembly code
3. byte code
4. virtual machine code

Title

What type of code is created by the Python compiler?

type

mc

Section

1.4 Becoming Familiar with Your Programming Environment

id

testbank-py-1-ch01-20

21. What is the correct sequence of steps invoked by the Python Interpreter:

1. source code -> virtual machine -> byte code -> compiler
2. source code -> compiler -> byte code -> virtual machine
3. compiler -> source code -> virtual machine -> byte code
4. byte code -> virtual machine -> source code -> compiler

Title

What is the role of the Interpreter?

type

mc

Section

1.4 Becoming Familiar with Your Programming Environment

id

testbank-py-1-ch01-21

22. Which line in the following program is a comment line?

```
1: print("Your lucky number is...")
2: lucky = 7
3: # Display the lucky number
4: print(lucky)
```

1. Line number 1
2. Line number 2
3. Line number 3
4. Line number 4

Title

What is the syntax for a comment line?

type

mc

Section

1.5 Analyzing Your First Program

id

testbank-py-2-ch01-22

from

testbank-py-1-ch01-22

23. What is the purpose of a comment?

1. A comment provides information to the virtual machine
2. A comment provides information to the compiler
3. A comment provides information to the programmer
4. A comment provides information to the user running the program

Title

What is the purpose of a comment?

type

mc

Section

1.5 Analyzing Your First Program

id

testbank-py-2-ch01-23

from

testbank-py-1-ch01-23

24. A collection of programming instructions that carry out a particular task is called a: program

1. program
2. compiler
3. function
4. comment

Title

What is a collection of programming instructions called?

type

mc
Section
1.5 Analyzing Your First Program
id
testbank-py-1-ch01-24

25. To use or call a function, you need to specify:

1. the function name and its arguments
2. the function name only
3. the function name and at least one argument
4. the function name and a comment describing its use

Title
How do you call a function?
type
mc
Section
1.5 Analyzing Your First Program
id
testbank-py-1-ch01-25

26. A sequence of characters enclosed in quotes is called:

1. a string
2. a list
3. a function
4. an argument

Title
What is a sequence of characters enclosed in quotes called?
type
mc
Section
1.5 Analyzing Your First Program
id
testbank-py-1-ch01-26

27. Which of the following is considered a `string` in Python?

1. `Today is Wednesday`
2. `"Today is Wednesday"`
3. `# Today is Wednesday #`
4. `Today_is_Wednesday`

Title
What is a string in Python?
type
mc
Section
1.5 Analyzing Your First Program
id
testbank-py-1-ch01-27

28. What is wrong with the following code snippet?

```
print("Hello")
    print("World!")
```

1. The print function cannot be called twice
2. The print function is missing an argument
3. Nothing, the program prints Hello World on the same line
4. The second line should not be indented

Title

What is wrong with the code snippet?

type

mc

Section

1.5 Analyzing Your First Program

id

testbank-py-1-ch01-28

29. What is printed by the following code snippet?

```
print(25 + 84)
```

1. 2584
2. 109
3. 25 + 84
4. Nothing, this code snippet causes a compile time error

Title

What is printed by a given code snippet?

type

mc

Section

1.5 Analyzing Your First Program

id

testbank-py-1-ch01-29

30. What is printed by the following code snippet?

```
print("The answer is", 25 + 84)
```

1. The answer is 2584
2. The answer is 109
3. The answer is 25 + 84
4. Nothing, this code snippet causes a compile time error

Title

What is printed by a given code snippet?

type

mc

Section
1.5 Analyzing Your First Program
id
testbank-py-1-ch01-30

31. What is printed by the following code snippet?

```
print("The answers are:", 4 + 3 * 2, 7 * 5 - 24)
```

1. The answers are: 10 11
2. The answers are: 14 11
3. The answers are: 24 10
4. Nothing, this code snippet causes a compile time error

Title
What is printed by a given code snippet?
type
mc
Section
1.5 Analyzing Your First Program
id
testbank-py-1-ch01-31

32. What is printed by the following code snippet?

```
print("25 + 84")
```

1. 2584
2. 109
3. 25 + 84
4. Nothing, this code snippet causes a compile time error

Title
What is printed by a given code snippet?
type
mc
Section
1.5 Analyzing Your First Program
id
testbank-py-1-ch01-32

33. What is printed by the following code snippet?

```
print>Hello)
```

1. Nothing, an error is produced indicating that `Hello` is not defined
2. `Hello`
3. `'Hello'`
4. `"Hello"`

Title
What is printed by a given code snippet?
type
mc
Section
1.5 Analyzing Your First Program
id
testbank-py-1-ch01-33

34. What is printed by the following code snippet?

```
print("Good", "Morning", "Class", "!")
```

1. GoodMorningClass!
2. Good Morning Class!
3. Good Morning Class !
4. nothing, this code produces a syntax error

Title
What is printed by a given code snippet?
type
mc
Section
1.5 Analyzing Your First Program
id
testbank-py-1-ch01-34

35. What is another name for a compile-time error?

1. Logic error
2. Semantic error
3. Syntax error
4. Lexicographic error

Title
What is another name for a compile-time error?
type
mc
Section
1.6 Errors
id
testbank-py-1-ch01-35

36. Although the following code statement is valid, `print(10/0)`, what will happen when this code is executed?

1. The program prints 0
2. The error message `ZeroDivisionError: int division or modulo by zero is displayed`
3. The program runs, but nothing is printed
4. The error message `SyntaxError: EOL while scanning string literal`

Title

What is another name for a compile-time error?

type

mc

Section

1.6 Errors

id

testbank-py-1-ch01-36

37. The programmer, not the compiler, is responsible for testing a program to identify what?

1. Undefined symbols
2. Syntax errors
3. Logic errors
4. Out-of-memory errors

Title

The programmer, not the compiler, is responsible for testing a program to identify?

type

mc

Section

1.6 Errors

id

testbank-py-1-ch01-37

38. What is it called when you describe the steps that are necessary for finding a solution to a problem in programming?

1. algorithm
2. compile
3. interpret
4. code

Title

What is it called when you describe the steps that are necessary for finding a solution to a problem in programming?

type

mc

Section

1.7 Problem Solving: Algorithm Design

id

testbank-py-1-ch01-38

39. The following pseudocode calculates the total purchase price for an item including sales tax, what is the missing last line?

```
Start by setting the total cost to zero.  
Ask the user for the item cost.  
Ask the user for the tax rate.  
Set the item tax to item cost times tax rate.  
_____
```

1. Set the total cost to the item cost plus the tax rate.
2. Set the total cost to the item cost times the tax.
3. Set the total cost to the item cost plus the tax.
4. Set the total cost to the item tax.

Title

What is the missing pseudocode?

type

mc

Section

1.7 Problem Solving: Algorithm Design

id

testbank-py-1-ch01-39

40. What is the purpose of the following algorithm, written in pseudocode?

```
num = 0
Repeat the following steps 15 times
Ask user for next number
If userNum > num
    num = userNum
Print num
```

1. To print out the 15 numbers
2. To find the smallest among 15 numbers
3. To search for a particular number among 15 numbers
4. To find the highest among 15 numbers

Title

What is the purpose of this algorithm?

type

mc

Section

1.7 Problem Solving: Algorithm Design

id

testbank-py-1-ch01-40

41. Which of the following is NOT an example of an algorithm?

1. A recipe to make chocolate chip cookies
2. A grocery list
3. Instructions for changing a flat tire
4. Steps required to calculate the amount of paint required to paint a room

Title

Which of the following is NOT an example of an algorithm?

type

mc

Section

1.7 Problem Solving: Algorithm Design

id

testbank-py-1-ch01-41

42. Which of the following pseudocode statements represents a decision?

1. For each number in a sequence...
2. While the balance is > 0
3. total cost = unit cost + tax
4. if total cost > 15

Title

Which of the following pseudocode statements represents a decision statement?

type

mc

Section

1.7 Problem Solving: Algorithm Design

id

testbank-py-1-ch01-42

43. Which of the following pseudocode statements represents a repetition statement?

1. if total cost > 15
2. set i equal to 3
3. total cost = unit cost + tax
4. while the balance is > 0

Title

Which of the following pseudocode statements represents a repetition statement?

type

mc

Section

1.7 Problem Solving: Algorithm Design

id

testbank-py-2-ch01-43

from

testbank-py-1-ch01-43

44. Which of the following statements is **NOT** correct?

1. Pseudocode should be unambiguous.
2. Pseudocode should be executable.
3. Pseudocode should be properly formatted.
4. Pseudocode should be terminating.

Title

Which of the following is NOT important when writing pseudocode?

type

mc

Section

1.7 Problem Solving: Algorithm Design

id

testbank-py-2-ch01-44

from

45. Imagine that you are planning to buy a new cell phone. After doing some research, you have determined that there are two different cell phones that will meet your needs. These cell phones have different purchase prices and each mobile service provider charges a different rate for each minute that the cell phone is used. In order to determine which cell phone is the better buy, you need to develop an algorithm to calculate the total cost of purchasing and **using** each cell phone. Which of the following options lists all the inputs needed for this algorithm?
1. The cost of each cell phone and the rate per minute for each cell phone
 2. The cost of each cell phone and the number of minutes provided with each cell phone
 3. The cost of each cell phone, the rate per minute for each cell phone, and the number of minutes provided with each cell phone
 4. The cost of each cell phone, the rate per minute for each cell phone, and the number of minutes you would use the cell phone

Title

Which inputs do you need to calculate cost of purchasing/using cell phone?

type

mc

Section

1.7 Problem Solving: Algorithm Design

id

testbank-py-2-ch01-45

from

testbank-py-1-ch01-45

46. In order to run Python programs, the computer needs to have software called a(n)?
1. debugger
 2. interpreter
 3. windows
 4. assembler

Title

Software needed to run Python on a computer?

type

mc

Section

1.3 The Python Programming Language

id

testbank-py-1-ch01-46

47. A Python interpreter is:
1. a folder hierarchy
 2. a piece of hardware
 3. a piece of software
 4. a type of secondary storage

Title
What is a Python virtual machine?
type
mc
Section
1.4 Becoming Familiar with Your Programming Environment
id
testbank-py-2-ch01-47
from
testbank-py-1-ch01-47

48. Consider the following pseudocode. What does it produce?

```
Create a list of consecutive integers from two to n (2, 3, 4, ..., n).
Initially, let p equal 2.
Repeat the following steps until p is greater than n:
Remove all of the multiples of p less than or equal to n from the list.
If the list contains a number greater than p
    Find the first number remaining in the list greater than p.
    Replace p with this number.
Otherwise set p equal to n + 1
```

1. All even numbers up to n
2. All factorial numbers up to n
3. All odd numbers up to n
4. All prime numbers up to n

Title
Software needed to run Python on a computer?
type
mc
Section
1.7 Problem Solving: Algorithm Design
id
testbank-py-2-ch01-48
from
testbank-py-1-ch01-48

49. Consider the following pseudocode. What does it produce?

```
Set a = 0
Set b = 0
Set c = 1
Set d = 1
Report the value of d
Repeat until a equals 10
    Set d = b + c
    Set b = c
    Set c = d
    Add 1 to a
    Report the value of d
```

1. 1 1 2 3 5 8 13 21 34 55 89
2. 1 1 3 5 7 9 11 13 15 17 19 21
3. 1 1 3 6 9 12 15 18 21 24 27 30
4. 1 2 3 4 5 6 7 8 9 10 11

Title

What does this algorithm produce?

type

mc

Section

1.7 Problem Solving: Algorithm Design

id

testbank-py-2-ch01-49

from

testbank-py-1-ch01-49

50. A sequence of steps that is unambiguous, executable, and terminating is called:

1. a logarithm
2. a programming task
3. an algorithm
4. pseudocode

Title

What is a list of steps that are unambiguous, executable, and terminating called?

type

mc

Section

1.7 Problem Solving: Algorithm Design

id

testbank-py-1-ch01-50

51. Which of the follow statements is most correct?

1. Computer programs are comprised of a large number of simple instructions.
2. Computer programs are comprised of a large number of sophisticated instructions.
3. Computer programs are comprised of a small number of simple instructions.
4. Computer programs are comprised of a small number of sophisticated instructions.

Title

What are computer programs comprised of?

type

mc

Section

1.1 Computer Programs

id

testbank-py-1-ch01-51

52. Which of the following is **not** a benefit of the Python programming language compared to other popular programming languages like Java, C and C++?
1. Python encourages experimentation and rapid turn around
 2. Python has a cleaner syntax
 3. Python is easier to use
 4. Python programs run more quickly

Title

What are the benefits of Python compared to other programming languages?

type

mc

Section

1.3 The Python Programming Language

id

testbank-py-1-ch01-52

53. Which of the following code segments will display `Hello World!` when it is run?

1. `print(Hello ", " World!")`
2. `print("Hello", "World!")`
3. `print("Hello", "World", "!")`
4. `print("Hello", ", ", "World", "!")`

Title

Which code segment displays the desired result?

type

mc

Section

1.5 Analyzing Your First Program

id

testbank-py-1-ch01-53

54. When a function is called, the values placed in parentheses are referred to as:
1. arguments
 2. keywords
 3. operators
 4. statements

Title

What are the parts of a function call?

type

mc

Section

1.5 Analyzing Your First Program

id

testbank-py-1-ch01-54

55. Which type of error is usually the most difficult to locate in your program?

1. Indentation Error
2. Logic Error
3. Syntax Error
4. Zero Division Error

Title

Which type of error is most difficult to locate?

type

mc

Section

1.6 Errors

id

testbank-py-1-ch01-55