

1. What is a `list` in Python?

1. a series of numbers
2. a container that stores a collection of elements that are arranged in a linear or sequential order
3. a series of strings
4. a series of references or locations of data in memory

Title

What is a list in Python?

type

mc

Section

6.1 Basic Properties of Lists

id

testbank-py-1-ch06-01

2. Given the following list, what value is at index 5?

```
values = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
```

1. 5
2. 6
3. 7
4. 4

Title

Given the following list, what value is at index 5?

type

mc

Section

6.1 Basic Properties of Lists

id

testbank-py-1-ch06-02

3. Consider the following line of code:

```
somelist = ["a", "b", "c", "d", "e", "f", "g", "h", "i", "j", "k", "l", "m", "n", "o", "p", "q", "r", "s", "t", "u", "v", "w", "x"]
```

Which one of the following options is a valid line of code for displaying the element at the twenty-second position in the list?

1. `somelist(21)`
2. `somelist[21]`
3. `print(somelist(21))`
4. `print(somelist[21])`

Title

Which one of the following options is a valid line of code for displaying the element at the twenty-second position in the list?

type

mc

Section

6.1 Basic Properties of Lists

id

testbank-py-1-ch06-03

4. Given the list below, what are the upper and lower bounds?

```
somelist = ["a", "b", "c", "d", "e", "f", "g", "h", "i", "j", "k", "l", "m", "n", "o", "p", "q", "r", "s", "t", "u", "v", "w", "x"]
```

1. 1, 26
2. 0, 25
3. 1, 25
4. 0, 26

Title

What are the upper and lower bounds of a given list?

type

mc

Section

6.1 Basic Properties of Lists

id

testbank-py-1-ch06-04

5. What is the valid range of index values for a list?

1. at least zero and less than the number of elements in the list
2. at least one and less than the number of elements in the list
3. at least zero and less than or equal to the number of elements in the list
4. at least one and less than or equal to the number of elements in the list

Title

What is the valid range of index values for a list?

type

mc

Section

6.1 Basic Properties of Lists

id

testbank-py-1-ch06-05

6. What is printed after executing the following code snippet?

```
somelist = ["a", "b", "c", "d", "e", "f", "g", "h", "i", "j", "k", "l", "m", "n", "o", "p", "q", "r", "s", "t", "u", "v", "w", "x", "y", "z"]
for i in range(len(somelist)) :
    print(somelist[i], end = "")

1. abcdefghijklmnopqrstuvwxyz
2. a b c d e f g h i j k l m n o p q r s t u v w x y z
3. bcdefghijklmnopqrstuvwxyz
4. abcdefghijklmnopqrstuvwxy
```

Title

What is printed after executing the following code snippet?

type

mc

Section

6.1 Basic Properties of Lists

id

testbank-py-1-ch06-06

7. What is printed after executing the following code snippet?

```
somelist = ["a", "b", "c", "d", "e", "f", "g", "h", "i", "j", "k", "l", "m", "n", "o", "p", "q", "r", "s", "t", "u", "v", "w", "x", "y", "z"]
for i in range(0, len(somelist), 2) :
    print(somelist[i], end = "")

1. abcdefghijklmnopqrstuvwxyz
2. a b c d e f g h i j k l m n o p q r s t u v w x y z
3. acegikmoqsuwy
4. bdfhjlnprtvxz
```

Title

What is printed after executing the following code snippet?

type

mc

Section

6.1 Basic Properties of Lists

id

testbank-py-1-ch06-07

8. Which statement correctly creates a list that contains four elements?

1. values[4]
2. values = [4]
3. values = [1, 2, 3, 4]
4. value[4] = [1, 2, 3, 4]

Title

Which statement correctly creates a list that contains four elements?

type

mc

Section

6.1 Basic Properties of Lists

id

testbank-py-1-ch06-08

9. Which statement correctly identifies the error in this code snippet?

```
scores = [80, 85, 60.5, 95, 70]
print(scores[5])

1. DataTypeError: cannot mix integer and floating point numbers
2. There is no error. The code runs and prints 70.
3. NameError: name 'scores' is not defined
4. IndexError: list index out of range
```

Title

Which statement correctly identifies the error in this code snippet?

type

mc

Section

6.1 Basic Properties of Lists

id

testbank-py-2-ch06-09

from

testbank-py-1-ch06-09

10. What is the difference between a list and a string?

1. lists are sequences but strings are not and therefore you cannot access a string element using []
2. lists are immutable, but strings can be changed
3. lists can hold values of any type, whereas strings are only sequences of characters
4. elements in a list can be accessed using an integer as the index value, but strings can use any numeric data type for the index

Title

What is the difference between a list and a string?

type

mc

Section

6.1 Basic Properties of Lists

id

testbank-py-1-ch06-10

11. Which statement gets the length of the list values?

```

1. numValues = length(values)
2. numValues = len(values)
3. numValues = size(values)
4. numValues = values.length

```

Title

Which statement gets the length of the list values?

type

mc

Section

6.1 Basic Properties of Lists

id

testbank-py-1-ch06-11

12. Given a list `values` that contains the first ten prime numbers, which statement prints the index and value of each element in the list?

```

1. for i in range(11) :
    print(i, values[i])
2. for i in range(10) :
    print(i, values[i])
3. for i in range(1, 10) :
    print(i, values[i])
4. for i in range(1, 11) :
    print(i, values[i])

```

Title

Given a list `values` that contains the first ten prime numbers, which statement prints each element in the list?

type

mc

Section

6.1 Basic Properties of Lists

id

testbank-py-1-ch06-12

13. Given a list `values` that contains the first ten prime numbers, which statement does NOT print each element in the list?

```

1. for i in range(len(values)) :
    print(values[i])
2. for element in values :
    print(element)
3. for i in range(0, len(values)) :
    print(values[i])
4. for i in range(1, len(values)) :
    print(values[i])

```

Title

Given a list `values` that contains the first ten prime numbers, which statement does NOT print each element in the list?

type

mc

Section

6.1 Basic Properties of Lists

id

testbank-py-1-ch06-13

14. For the list: `prices = [10.00, 15.50, 13.25, 20.15]`, what value is contained in `prices`?

```

1. the location of the list
2. the first value in the list
3. the size of the list
4. the number of elements in the list

```

Title

For the list: `prices = [10.00, 15.50, 13.25, 20.15]`, what value is contained in `prices`?

type

mc

Section

6.1 Basic Properties of Lists

id

testbank-py-1-ch06-14

15. Given the following code snippet, which statement correctly creates an alias for the list `prices`?

```
prices = [10.00, 15.50, 13.25, 20.15]
```

```

1. values[10] = prices
2. values = prices
3. for element in prices : values = element
4. values[10] = prices[10]

```

Title

Given the following code snippet, which statement correctly creates an alias for the list `prices`?

type

mc

Section

6.1 Basic Properties of Lists

id

testbank-py-1-ch06-15

16. Consider the following code snippet. What will be stored in the list `prices` after this code executes?

```
prices = [10.00, 15.50, 13.50, 20.15]
for i in range(len(prices)) :
    prices[i] = prices[i] * 1.06

1. [10.00, 15.50, 13.50, 20.15]
2. [10.60, 16.43, 14.31, 21.36]
3. [1.06, 1.06, 1.06, 1.06]
4. [0.0, 0.0, 0.0, 0.0]
```

Title

What is stored in the list after the code executes?

type

mc

Section

6.1 Basic Properties of Lists

id

testbank-py-2-ch06-16

from

testbank-py-1-ch06-16

17. Which of the following statements stores the numbers 1 through 5 into a list named `values`?

1. `values = 1, 2, 3, 4, 5`
2. `values = (1, 2, 3, 4, 5)`
3. `values = [1, 2, 3, 4, 5]`
4. `values = {1, 2, 3, 4, 5}`

Title

Which statement stores the numbers 1 through 5 into a list?

type

mc

Section

6.1 Basic Properties of Lists

id

testbank-py-1-ch06-17

18. Consider the following code segment:

```
values = [4, 12, 0, 1, 5]
print(values[1])
```

What is displayed when it runs?

1. 0
2. 1
3. 4
4. 12

Title

Trace code that accesses a list element

type

mc

Section

6.1 Basic Properties of Lists

id

testbank-py-1-ch06-18

19. Consider the following list:

```
values = [12, 4, 8, 16, 24]
```

Which statement displays the last element in the list?

1. `print(values[0])`
2. `print(values[4])`
3. `print(values[5])`
4. `print(values[24])`

Title

Which statement displays the last element in the list?

type

mc

Section

6.1 Basic Properties of Lists

id

testbank-py-1-ch06-19

20. Consider the following code segment:

```
values = [1, 2, 3, 4, 5]
moreValues = values
moreValues[3] = 6

print(values)
```

What is displayed when it runs?

1. [1, 2, 3, 4, 5]
2. [1, 2, 6, 4, 5]
3. [1, 2, 3, 6, 5]
4. [1, 2, 3, 4, 5, 6]

Title

Trace code involving two lists

type

mc

Section

## 6.1 Basic Properties of Lists

id

testbank-py-1-ch06-20

21. What will happen when the following code segment is executed?

```
values = [1.618, 2.71, 3.14]
print(values[3])
```

1. Python will display an out-of-range error
2. Python won't display anything
3. Python will display 3
4. Python will display 3.14

Title

What will happen when a code segment involving lists is executed?

type

mc

Section

6.1 Basic Properties of Lists

id

testbank-py-1-ch06-21

22. Given the following code snippet, which statement correctly copies the contents of the list `prices`?

```
prices = [10.00, 15.50, 13.25, 20.15]
```

1. `values[10] = prices`
2. `values = list(prices)`
3. `for element in prices :`  
    `values = element`
4. `values[10] = prices[10]`

Title

Given the following code snippet, which statement correctly copies the contents of the list `prices`?

type

mc

Section

6.2 List Operations

id

testbank-py-1-ch06-22

23. Given the definition of a list: `names = []` which statement correctly adds "Harry" to the list?

1. `names[] = "Harry"`
2. `names[len(names) + 1] = "Harry"`
3. `names.add("Harry")`
4. `names.append("Harry")`

Title

Given the definition of a list: `names = []` which statement correctly adds "Harry" to the list?

type

mc

Section

6.2 List Operations

id

testbank-py-1-ch06-23

24. What is the value of `names` after the following code segment has run?

```
names = []
names.append("Amy")
names.append("Bob")
names.append("Peg")
names[0] = "Cy"
names.insert(0, "Ravi")
```

1. `['Ravi', 'Cy', 'Amy', 'Bob', 'Peg']`
2. `['Cy', 'Amy', 'Bob', 'Peg']`
3. `['Ravi', 'Cy', 'Bob', 'Peg']`
4. `['Ravi', 'Amy', 'Bob', 'Peg']`

Title

What is stored in a list after performing append and insert operations?

type

mc

Section

6.2 List Operations

id

testbank-py-2-ch06-24

from

testbank-py-1-ch06-24

25. What is the value of `names` after the following code segment has run?

```
names = []
names.append("Amy")
names.append("Bob")
names.append("Peg")
names[0] = "Cy"
names.insert(0, "Ravi")
names.insert(4, "Savannah")
```

1. ['Ravi', 'Cy', 'Bob', 'Peg', 'Savannah']
2. ['Ravi', 'Cy', 'Amy', 'Bob', 'Peg', 'Savannah']
3. ['Cy', 'Amy', 'Bob', 'Peg', 'Savannah']
4. IndexError: list assignment index out of range

Title

What is stored in a list after performing several append and insert operations?

type

mc

Section

6.2 List Operations

id

testbank-py-2-ch06-25

from

testbank-py-1-ch06-25

26. Which of the following statements looks for the name 'Bob' in the list names?

1. if "Bob" found in names :  
print("found Bob")
2. if "Bob" in names :  
print("found Bob")
3. if names contains "Bob" :  
print("found Bob")
4. if names.indexOf("Bob") >= 0 :  
print("found Bob")

Title

Which of the following statements looks for the name 'Bob' in the list names?

type

mc

Section

6.2 List Operations

id

testbank-py-1-ch06-26

27. What is the value of the variable indexValue after the following code snippet runs?

```
states = ["Alaska", "Hawaii", "Florida", "Maine", "Ohio", "Florida"]
indexValue = states.index("Pennsylvania")
```

1. -1
2. 0
3. 6
4. A ValueError exception is raised.

Title

What value is computed by a code segment that invokes the index method?

type

mc

Section

6.2 List Operations

id

testbank-py-2-ch06-27

from

testbank-py-1-ch06-27

28. Given the following code snippet, what is the value of the variable indexValue?

```
states = ["Alaska", "Hawaii", "Florida", "Maine", "Ohio", "Florida"]
indexValue = states.index("Hawaii")
```

1. 2
2. 1
3. -1
4. 0

Title

Given the following code snippet, what is the value of the variable indexValue?

type

mc

Section

6.2 List Operations

id

testbank-py-1-ch06-28

29. Given the following code snippet, what is the value of the variable removedValue?

```
states = ["Alaska", "Hawaii", "Florida", "Maine", "Ohio", "Florida"]
removedValue = states.pop(3)
```

1. 3
2. Maine
3. Florida
4. Hawaii

Title

Given the following code snippet, what is the value of the variable removedValue?

type

mc

Section

## 6.2 List Operations

id

testbank-py-1-ch06-29

30. Given the following code snippet, what is the content of the list `states`?

```
states = ["Alaska", "Hawaii", "Florida", "Maine", "Ohio", "Florida"]
states.pop()

1. ["Alaska", "Hawaii", "Florida", "Maine", "Ohio", "Florida"]
2. ["Hawaii", "Florida", "Maine", "Ohio", "Florida"]
3. ["Alaska", "Hawaii", "Florida", "Maine", "Ohio"]
4. []
```

Title

Given the following code snippet, what are the contents of list `states`?

type

mc

Section

6.2 List Operations

id

testbank-py-1-ch06-30

31. Given the following code snippet, what are the contents of the list `states`?

```
states = ["Alaska", "Hawaii", "Florida", "Maine", "Ohio", "Florida"]
states.remove("Florida")

1. ["Alaska", "Hawaii", "Maine", "Ohio", "Florida"]
2. ["Hawaii", "Hawaii", "Maine", "Ohio"]
3. ["Alaska", "Hawaii", "Florida", "Maine", "Ohio"]
4. ["Alaska", "Hawaii", "Florida", "Maine", "Ohio", "Florida"]
```

Title

Given the following code snippet, what are the contents of the list `states`?

type

mc

Section

6.2 List Operations

id

testbank-py-1-ch06-31

32. What is the value of `states` after the following code segment has run?

```
element = "Ohio"
states = ["Alaska", "Hawaii", "Florida", "Maine", "Ohio", "Florida"]
states.remove(element)

1. ["Alaska", "Hawaii", "Florida", "Maine"]
2. []
3. ["Alaska", "Hawaii", "Florida", "Maine", "Ohio", "Florida"]
4. ["Alaska", "Hawaii", "Florida", "Maine", "Florida"]
```

Title

What value is calculated by a code segment that invokes the `remove` method?

type

mc

Section

6.2 List Operations

id

testbank-py-2-ch06-32

from

testbank-py-1-ch06-32

33. Given the following code snippet, what are the contents of the list `fullNames`?

```
firstNames = ["Joe", "Jim", "Betsy", "Shelly"]
lastNames = states = ["Jones", "Patel", "Hicks", "Fisher"]
fullNames = firstNames + lastNames

1. ["Joe", "Jones", "Jim", "Patel", "Betsy", "Hicks", "Shelly", "Fisher"]
2. ["Joe Jones", "Jim Patel", "Betsy Hicks", "Shelly Fisher"]
3. ["Joe", "Jim", "Betsy", "Shelly", "Jones", "Patel", "Hicks", "Fisher"]
4. ["Joe", "Jim", "Betsy", "Shelly"]
```

Title

Given the following code snippet, what are the contents of the list `fullNames`?

type

mc

Section

6.2 List Operations

id

testbank-py-1-ch06-33

34. Given the following code snippet, what are the contents of the list `names`?

```
firstNames = ["Joe", "Jim", "Betsy", "Shelly"]
names = firstNames * 2

1. ["Joe", "Jim", "Betsy", "Shelly", "Joe", "Jim", "Betsy", "Shelly"]
2. ["Joe", "Joe", "Jim", "Jim", "Betsy", "Betsy", "Shelly", "Shelly"]
3. ["Joe", "Jim", "Betsy", "Shelly", 2]
4. ["Joe", "Jim", "Betsy", "Shelly"]
```

Title  
Given the following code snippet, what are the contents of the list names?  
type  
mc  
Section  
6.2 List Operations  
id  
testbank-py-1-ch06-34

35. Which statement(s) allows us to initialize the list `numbers` with 10 elements all set to zero?

1. `numbers = [0]`
2. `numbers[10] = 0`
3. `numbers = [0] * 10`
4. `numbers[10] = [0] * 10`

Title  
Which statement(s) allows us to initialize the list `numbers` with 10 elements all set to zero?  
type  
mc  
Section  
6.2 List Operations  
id  
testbank-py-1-ch06-35

36. Given the following code snippet, what is printed?

```
nums = [1, 2, 3, 4, 5]
nums2 = [5, 4, 3, 2, 1]
if nums == nums2 :
    print("lists are equal")
else :
    print("lists are not equal")
```

1. lists are equal
2. lists are not equal
3. lists are equal
4. an error occurs and nothing is printed

Title  
Given the following code snippet, what is printed?  
type  
mc  
Section  
6.2 List Operations  
id  
testbank-py-1-ch06-36

37. Which statement correctly compares these two lists for equality?

```
nums = [1, 2, 3, 4, 5]
nums2 = [5, 4, 3, 2, 1]
```

1. `if nums == nums2`
2. `if nums equals nums2`
3. `if nums in nums2`
4. None of the above. A loop is needed to compare each item individually.

Title  
Which statement correctly compares two lists for equality?  
type  
mc  
Section  
6.2 List Operations  
id  
testbank-py-2-ch06-37  
from  
testbank-py-1-ch06-37

38. What is the resulting value of this code snippet?

```
sum([1, 2, 3, 4, 5])
```

1. 121
2. 16
3. 15
4. 14

Title  
What is the resulting value of this code snippet?  
type  
mc  
Section  
6.2 List Operations  
id  
testbank-py-1-ch06-38

39. What is the resulting value of this code snippet?

```
max(["Roland", "Kent", "Ravi", "Amy"])
```

1. Invalid Type Error
2. "Roland"
3. "Amy"

4. "Ravi"

Title  
What is the resulting value of this code snippet?  
type  
mc  
Section  
6.2 List Operations  
id  
testbank-py-1-ch06-39

40. What is the resulting content of the list after this code snippet?

```
min(["Roland", "Kent", "Ravi", "Amy"])
```

1. Invalid Type Error
2. "Roland"
3. "Amy"
4. "Ravi"

Title  
What is the resulting content of this code snippet?  
type  
mc  
Section  
6.2 List Operations  
id  
testbank-py-1-ch06-40

41. What is the resulting content of the list `values` after this code snippet?

```
values = [1991, 1875, 1980, 1965, 2000]
values.sort()
```

1. [1991, 1875, 1980, 1965, 2000]
2. [2000, 1991, 1980, 1965, 1875]
3. [2000, 1991, 1875, 1980, 1965]
4. [1875, 1965, 1980, 1991, 2000]

Title  
What is the resulting contents of the list `values` after this code snippet?  
type  
mc  
Section  
6.2 List Operations  
id  
testbank-py-1-ch06-41

42. What is the resulting content of the list `letters` after this code snippet?

```
letters = list("abcdefg")
```

1. `letters` contains a list with the contents: ["a", "b", "c", "d", "e", "f", "g"]
2. `letters` contains a list with the contents: ["abcdefg"]
3. Invalid Type Error
4. `letters` contains a list with the contents: ("abcdefg")

Title  
What is the resulting value of this code snippet?  
type  
mc  
Section  
6.2 List Operations  
id  
testbank-py-1-ch06-42

43. Which of the following code segments will result in `values` containing the list ["Hydrogen", "Helium", "Lithium"]?

1. `values = []`  
`values.append("Lithium")`  
`values.append("Helium")`  
`values.append("Hydrogen")`
2. `values = []`  
`values.append("Hydrogen")`  
`values.append("Helium")`  
`values.append("Lithium")`
3. `values = ["Hydrogen"]`  
`values.append("Helium", "Lithium")`
4. `values = []`  
`values.append(["Hydrogen", "Helium", "Lithium"])`

Title  
Use append to construct the desired list  
type  
mc  
Section  
6.2 List Operations  
id  
testbank-py-1-ch06-43

44. Which of the following code segments will result in `values` containing the list ["X", "Y", "Z"]?

```

1. values = "X"
   values.insert(1, Y)
   values.insert(1, Z)

2. values = ["X"]
   values.insert(1, "Y")
   values.insert(1, "Z")

3. values = ["X"]
   values.insert(1, "Y")
   values.insert(2, "Z")

4. values = []
   values.insert(0, "X")
   values.insert(0, "Y")
   values.insert(0, "Z")

```

Title

Use insert to construct the desired list

type

mc

Section

6.2 List Operations

id

testbank-py-1-ch06-44

45. What is stored in `pos` when the following code segment executes?

```

values = ["J", "Q", "X", "Z"]
pos = values.find("Y")

```

1. -1
2. 0
3. 4
4. No value is stored because a runtime exception occurs

Title

Trace code that finds an element in a list

type

mc

Section

6.2 List Operations

id

testbank-py-1-ch06-45

46. What is in `grades` after the follow code segment executes?

```

grades = ["A", "B+", "C", "C+", "C", "B-"]
grades.remove("C")

```

1. ["A", "B+", "B-"]
2. ["A", "B+", "C+", "B-"]
3. ["A", "B+", "C+", "C", "B-"]
4. ["A", "B+", "", "C+", "C", "B-"]

Title

Trace code that removes an element form a list

type

mc

Section

6.2 List Operations

id

testbank-py-1-ch06-46

47. What is in `values` after the following code segment executes?

```

values = [1, 2, 3]
values = values * 4

```

1. [4, 8, 12]
2. [1, 2, 3, 4]
3. [1, 2, 3, 1, 2, 3, 1, 2, 3, 1, 2, 3]
4. Nothing because a runtime error occurs

Title

Trace code that attempts to multiply a list by an integer

type

mc

Section

6.2 List Operations

id

testbank-py-2-ch06-47

from

testbank-py-1-ch06-47

48. What is displayed by the following code segment?

```

values = ["Q", "W", "E", "R", "T", "Y"]
print(min(values))

```

1. Q
2. W
3. E
4. R

Title  
Trace code that calls the min function  
type  
mc  
Section  
6.2 List Operations  
id  
testbank-py-1-ch06-48

49. What is output by the following code segment?

```
x = list("QWERTY")
print(x)
```

1. Q
2. ["Q"]
3. ["QWERTY"]
4. ["Q", "W", "E", "R", "T", "Y"]

Title  
Trace code that calls the list function  
type  
mc  
Section  
6.2 List Operations  
id  
testbank-py-1-ch06-49

50. What is output by the following code segment?

```
values = ["Q", "W", "E", "R", "T", "Y"]
print(values[2 : 4])
```

1. ["W", "E"]
2. ["W", "E", "R"]
3. ["E", "R"]
4. ["E", "R", "T"]

Title  
Trace code that uses a slice  
type  
mc  
Section  
6.2 List Operations  
id  
testbank-py-1-ch06-50

51. What is the resulting contents of the list `values` in this code snippet?

```
values = []
for i in range(10) :
    values.append(i)
```

1. [0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
2. [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
3. [0, 0, 0, 0, 0, 0, 0, 0, 0, 0]
4. [1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0]

Title  
What is the resulting contents of the list `values` in this code snippet?  
type  
mc  
Section  
6.3 Common List Algorithms  
id  
testbank-py-1-ch06-51

52. What is the resulting value of the variable `sentence` in this code snippet?

```
words = ["Mary", "had", "a", "little", "lamb"]
sentence = ""
for word in words :
    sentence = sentence + word
```

1. Mary had a little lamb
2. Maryhadalittlelamb
3. "Mary had a little lamb"
4. Mary, had, a, little, lamb

Title  
What is the resulting value of the variable `sentence` in this code snippet?  
type  
mc  
Section  
6.3 Common List Algorithms  
id  
testbank-py-1-ch06-52

53. What is the resulting value of the variable `sentence` in this code snippet?

```
words = ["Mary", "had", "a", "little", "lamb"]
sentence = str(words)
```

1. Mary had a little lamb

```

2. Maryhadalittlelamb
3. ['Mary', 'had', 'a', 'little', 'lamb']
4. Mary, had, a, little, lamb

```

Title

What is the resulting value of the variable sentence in this code snippet?

type

mc

Section

6.3 Common List Algorithms

id

testbank-py-1-ch06-53

54. What is missing from this code snippet to find the largest value in the list?

```

largest = values[0]
for i in range(1, len(values)) :
    if values[i] > largest :

```

```

1. i = i + 1
2. largest = values[i]
3. largest = values[0]
4. largest = values[i-1]

```

Title

What is missing from this code snippet to find the largest value in the list?

type

mc

Section

6.3 Common List Algorithms

id

testbank-py-1-ch06-54

55. What is missing from this code snippet to find the longest value in the list?

```

colors = ["red", "purple", "blue", "green", "yellow", "light green"]
longest = colors[0]
for i in range(1, len(colors)) :

```

```

    longest = colors[i]

1. if colors[i] > longest :
2. if len(colors[i]) > longest :
3. if len(colors[i]) > len(longest) :
4. if colors[i] > len(longest) :

```

Title

What is missing from this code snippet to find the longest value in the list?

type

mc

Section

6.3 Common List Algorithms

id

testbank-py-2-ch06-55

from

testbank-py-1-ch06-55

56. What type of search inspects every element sequentially?

```

1. binary search
2. linear search
3. simple search
4. recursive search

```

Title

When type of search inspects every element sequentially?

type

mc

Section

6.3 Common List Algorithms

id

testbank-py-2-ch06-56

from

testbank-py-1-ch06-56

57. What is printed by the following code snippet?

```

words = ["Today", "is", "Wednesday", "tomorrow", "is", "Thursday"]
for i in range(len(words)) :
    word = words[i]
    if len(word) < 8 :
        words.pop(i)
print(words)

```

```

1. Nothing, this code snippet causes an IndexError: list index out of range error.
2. ["Today", "is", "Wednesday", "tomorrow", "is", "Thursday"]
3. ["Wednesday", "tomorrow", "Thursday"]
4. ["Today", "is", "is"]

```

Title

What is printed by a code snippet that includes lists, loops and the pop method?

type

mc

Section

## 6.3 Common List Algorithms

id testbank-py-2-ch06-57  
 from testbank-py-1-ch06-57

58. What is printed by the following code snippet?

```
words = ["Today", "is", "Wednesday", "tomorrow", "is", "Thursday"]
i = 0
while i < (len(words)) :
    word = words[i]
    if len(word) < 8 :
        words.pop(i)
    else :
        i = i + 1
print(words)
```

1. Nothing, this code snippet causes an `IndexError: list index out of range` error.
2. ["Today", "is", "Wednesday", "tomorrow", "is", "Thursday"]
3. ["Wednesday", "tomorrow", "Thursday"]
4. ["Today", "is", "is"]

Title What is printed by a code snippet that includes lists, loops and the pop method?

type mc

Section 6.3 Common List Algorithms

id testbank-py-2-ch06-58  
 from testbank-py-1-ch06-58

59. What code completes this code snippet to swap the first and last element in the list?

```
states = ["Alaska", "Hawaii", "Florida", "Maine"]
i = 0

_____
temp = states[j]
states[j] = states[0]
states[i] = temp
```

1. j = len(states)
2. j = len(states) - 1
3. j = len(states) + 1
4. j = 0

Title What code completes this code snippet to swap the first and last element in the list?

type mc

Section 6.3 Common List Algorithms

id testbank-py-1-ch06-59

60. The following code segment is supposed to display all of the elements in a list with dashes between them. For example, if `values` contains [1, 2, 3, 4, 5] then the program should display 1-2-3-4-5.

```
result = ""
for i in range(len(values)) :
    if i > 0 :
        _____
result = result + str(values[i])

print(result)
```

What line of code should be placed in the blank to achieve this goal?

1. print("-")
2. result = "-"
3. values[i] = "-"
4. result = result + "-"

Title Complete the code segment for displaying a list

type mc

Section 6.3 Common List Algorithms

id testbank-py-1-ch06-60

61. Consider the following code segment:

```
x = values[0]
for i in range(1, len(values)) :
    if values[i] > x :
        x = values[i]
```

Which of the following statements assigns the same value to `x` as the code segment above?

1. x = max(values)
2. x = min(values)
3. x = sum(values)
4. x = sorted(values)

Title  
Which line of code is equivalent to this code segment?  
type  
mc  
Section  
6.3 Common List Algorithms  
id  
testbank-py-1-ch06-61

62. The following code segment is supposed to count the number of times that the number 5 appears in the list `values`.

```
counter = 0

_____
    if (element == 5) :
        counter = counter + 1
```

What line of code should be placed in the blank in order to achieve this goal?

1. for counter in element :
2. for counter in values :
3. for element in counter :
4. for element in values :

Title  
Complete the code segment for counting the number of occurrences of a value in a list  
type  
mc  
Section  
6.3 Common List Algorithms  
id  
testbank-py-1-ch06-62

63. What does the following code segment do?

```
i = 0
while i < len(values) :
    if values[i] >= 4 and values[i] <= 6 :
        values.pop(i)
    else :
        i = i + 1
```

1. It removes all 5 from `values`
2. It removes all 4s, 5s and 6s from `values`
3. It removes the element at position 5 from `values`
4. It removes the elements at positions 4, 5 and 6 from `values`

Title  
What does this code segment involving lists do?  
type  
mc  
Section  
6.3 Common List Algorithms  
id  
testbank-py-1-ch06-63

64. Which code segment swaps the elements at position 0 and position 2 within the `values` list?

1. `values[0] = values[2]`
2. `values[0] = values[2]`  
`values[2] = values[0]`
3. `values[0] = temp`  
`values[0] = values[2]`  
`temp = values[2]`
4. `temp = values[2]`  
`values[2] = values[0]`  
`values[0] = temp`

Title  
Which code segment swap two elements in a list?  
type  
mc  
Section  
6.3 Common List Algorithms  
id  
testbank-py-1-ch06-64

65. The following code segment is supposed to read all of the integers entered by the user until a blank line is entered and store them in `values`.

```
values = []
inputStr = input("Enter a value (blank line to quit): ")

_____
    values.append(int(inputStr))
    inputStr = input("Enter a value (blank line to quit): ")
```

What line of code should be placed in the blank to achieve this goal?

1. for ch in inputStr :
2. for values in inputStr :
3. while inputStr != "" :
4. while inputStr in values :

Title  
Complete the code segment for reading a list of values from the user  
type  
mc

Section  
6.3 Common List Algorithms  
id  
testbank-py-1-ch06-65

66. Which of the following statements is NOT true about functions and lists:
1. a function can return a list
  2. a function can be called with a list as an argument
  3. when calling a function with a list argument, the function receives a copy of the list
  4. when calling a function with a list argument, the function receives a reference to the list not a copy of the list

Title  
Which of the following statements is NOT true about functions and lists:  
type  
mc

Section  
6.4 Using Lists with Functions  
id  
testbank-py-1-ch06-66

67. The following function is supposed to add 1 to every element in a list of integers.

```
def addOne(values) :
    for i in range(len(values)) :
        values[i] = values[i] + 1
```

What is wrong with the following function?

1. The statement `print(values)` must be added to the end of the function.
2. The statement `return values` must be added to the end of the function.
3. The for loop must be replaced with a while loop.
4. There is nothing wrong with the function. It works as intended.

Title  
Identify the error in a function that adds 1 to every element in a list of integers  
type  
mc

Section  
6.4 Using Lists with Functions  
id  
testbank-py-1-ch06-67

68. Given a list containing prices, how do you find the highest priced item and remove it from the list:

1. find the minimum, remove it from the list
2. find the maximum, remove it from the list
3. find the maximum, create a second list without this value
4. find the minimum, create a second list without this value

Title  
Given a list containing prices, how do you find the highest priced item and remove it from the list:  
type  
mc

Section  
6.5 Problem Solving: Adapting Algorithms  
id  
testbank-py-1-ch06-68

69. What does the following code segment do?

```
x = 0
for i in range(1, len(values)) :
    if values[i] > values[x] :
        x = i
```

1. It finds the largest item in `values` and stores it in `x`
2. It finds the position of the largest item in `values` and stores the position in `x`
3. It finds the smallest item in `values` and stores it in `x`
4. It finds the position of the smallest item in `values` and stores it in `x`

Title  
What does this code segment involving lists do?  
type  
mc

Section  
6.5 Problem Solving: Adapting Algorithms  
id  
testbank-py-1-ch06-69

70. What is the purpose of the following pseudocode:

```
i = 0
j = length / 2
While i < length / 2
    # Swap elements at positions i and j
    temp = a[i]
    a[i] = a[j]
    a[j] = temp

    i = i + 1
    j = j + 1
```

1. flip the first half of a list with the second half
2. sort the list from smallest to largest
3. sort the list from largest to smallest
4. reverse the entire list

Title  
What is the purpose of some pseudocode?  
type  
mc  
Section  
6.6 Problem Solving: Discovering Algorithms Manipulating Physical Objects  
id  
testbank-py-2-ch06-70  
from  
testbank-py-1-ch06-70

71. Which of the following items would not be a good object to use while solving algorithms such as swapping the first half of a list with the second half:
1. deck of cards
  2. dice
  3. coins
  4. toothpicks

Title  
Which of the following items would not be a good object to use while solving algorithms:  
type  
mc  
Section  
6.6 Problem Solving: Discovering Algorithms Manipulating Physical Objects  
id  
testbank-py-1-ch06-71

72. Which of the following statements best represents a deck of cards?
1. suits = ["Hearts", "Spades", "Diamonds", "Clubs"]  
faceValues = ["Ace", 2, 3, 4, 5, 6, 7, 8, 9, 10, "Jack", "Queen", "King"]
  2. suits = ["Hearts", "Spades", "Diamonds", "Clubs"]  
faceValues = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13]
  3. cards = [{"Ace of Hearts", "Ace of Spades", "Ace of Diamonds", "Ace of Clubs"},  
["2 of Hearts", "2 of Spades", "2 of Diamonds", "2 of Clubs"], etc.]
  4. suits = ["Hearts", "Spades", "Diamonds", "Clubs"]  
faceValues = [2, 3, 4, 5, 6, 7, 8, 9, 10]  
faceValues2 = ["Ace", "Jack", "Queen", "King"]

Title  
Which of the following statements best represents a deck of cards?  
type  
mc  
Section  
6.7 Tables  
id  
testbank-py-2-ch06-72  
from  
testbank-py-1-ch06-72

73. What is printed from the following code snippet?

```
prices = [[ 1.0, 3.50, 7.50 ],
          [ 10.0, 30.50, 70.50 ],
          [ 100.0, 300.50, 700.50 ],
          [ 1000.0, 3000.50, 7000.50 ]]
print(prices[1][2])
```

1. 30.5
2. 70.5
3. 700.5
4. 10.0

Title  
What is printed by a code snippet involving a table?  
type  
mc  
Section  
6.7 Tables  
id  
testbank-py-2-ch06-73  
from  
testbank-py-1-ch06-73

74. Given the list values = [0, 0, 0, 0, 0, 0, 0, 0, 0, 0], which statement fills the list with these numbers:

```
1 2 3 4 5 6 7 8 9 10
```

1. for i in range(10) :  
values[i] = i
2. for i in range(10) :  
values[i] = i + 1
3. for i in range(0, 10) :  
values[i] = i
4. for i in range(1, 10) :  
values[i] = i

Title  
Which statement stores the numbers 1 through 10 into an existing list?  
type

mc  
 Section  
 6.1 Basic Properties of Lists  
 id  
 testbank-py-2-ch06-74  
 from  
 testbank-py-1-ch06-74

75. Given the list `values = [0, 0, 0, 0, 0, 0, 0, 0, 0, 0]`, which statement fills the list with these numbers:

```
1 4 9 16 25 36 49 64 81 100
```

1. `for i in range(10) :`  
`values[i] = (i + 1) * (i + 1)`
2. `for i in range(10) :`  
`values[i] = i * i`
3. `for i in range(0, 10) :`  
`values[i] = i + i`
4. `for i in range(1, 10) :`  
`values[i] = (i + 1) * (i + 1)`

Title  
 Which statement stores 10 numbers into an existing list?

type  
 mc  
 Section  
 6.7 Tables  
 id  
 testbank-py-2-ch06-75  
 from  
 testbank-py-1-ch06-75

76. What does the following code segment do?

```
x = 0
for i in range(1, len(values)) :
    if values[i] < values[x] :
        x = i
```

1. It finds the largest item in `values` and stores it in `x`
2. It finds the position of the largest item in `values` and stores it in `x`
3. It finds the smallest item in `values` and stores it in `x`
4. It finds the position of the smallest item in `values` and stores it in `x`

Title  
 What does this code segment involving lists do?

type  
 mc  
 Section  
 6.5 Problem Solving: Adapting Algorithms  
 id  
 testbank-py-2-ch06-76  
 from  
 testbank-py-1-ch06-76

77. What does the following code segment do?

```
x = []
for i in range(5) :
    x.append([])
    for j in range(3) :
        x[i].append(0)
```

1. It creates a table with 3 columns and 5 rows and stores it in `x`.
2. It creates a table with 5 columns and 3 rows and stores it in `x`.
3. It creates a list of 15 elements and stores it in `x`.
4. It creates an empty list and stores it in `x`.

Title  
 What does this code segment involving lists do?

type  
 mc  
 Section  
 6.7 Tables  
 id  
 testbank-py-1-ch06-77

78. What output is generated by the following code segment?

```
table = [{"T", "U", "V"}, [{"W", "X", "Y"}]]
print(table[0])
```

1. `T`
2. `["T", "W"]`
3. `["T", "U", "V"]`
4. `[["T", "U", "V"], [{"W", "X", "Y"}]]`

Title  
 Trace the output for a code segment involving a table

type  
 mc  
 Section

## 6.7 Tables

id

testbank-py-1-ch06-78

79. What output is generated by the following code segment?

```
table = [{"T", "U", "V"}, [{"W", "X", "Y"}]]
print(table[1][1])
```

1. T
2. U
3. W
4. X

Title

Trace the output for a code segment involving a table

type

mc

Section

6.7 Tables

id

testbank-py-1-ch06-79

80. Consider the following table:

```
table = [{"T", "U", "V"}, [{"W", "X", "Y"}]]
```

Which statement will display Y?

1. `print(table[len(table) - 1][len(table[1]) - 1])`
2. `print(table[len(table) - 1][len(table[1])])`
3. `print(table[len(table)][len(table[1])] - 1)`
4. `print(table[len(table)][len(table[1])])`

Title

Which statement involving tables will display the letter Y?

type

mc

Section

6.7 Tables

id

testbank-py-1-ch06-80

81. What list is stored in x after this code segment has run?

```
x = []
for i in range(3) :
    x.append([])
    for j in range(i) :
        x[j].append(0)
```

1. `[[0, 0], [0], []]`
2. `[[0, 0], [0, 0], []]`
3. `[[0, 0], [0, 0], [0, 0]]`
4. `[[0, 0, 0], [0, 0, 0], [0, 0, 0]]`

Title

What does this code segment involving lists do?

type

mc

Section

6.7 Tables

id

testbank-py-2-ch06-81

from

testbank-py-1-ch06-81

82. What output is generated by the following code segment?

```
table = [{"T", "U", "V"}, [{"W", "X", "Y"}]]
print(table[1])
```

1. U
2. X
3. `["T", "W"]`
4. `["T", "U", "V"]`
5. `["W", "X", "Y"]`

Title

Trace the output for a code segment involving a table

type

mc

Section

6.7 Tables

id

testbank-py-2-ch06-82

from

testbank-py-1-ch06-82

83. What output is generated by the following code segment?

```
table = [{"T", "U", "V"}, [{"W", "X", "Y"}]]
print(table[0][0])
```

1. T

2. u
3. w
4. x

Title

Trace the output for a code segment involving a table

type

mc

Section

6.7 Tables

id

testbank-py-2-ch06-83

from

testbank-py-1-ch06-83

84. Consider the following table:

```
table = [ ["T", "U", "V"], ["W", "X", "Y"] ]
```

Which statement will display u?

1. `print(table[0][0])`
2. `print(table[0][1])`
3. `print(table[1][0])`
4. `print(table[1][1])`

Title

Which statement involving tables will display the letter U?

type

mc

Section

6.7 Tables

id

testbank-py-2-ch06-84

from

testbank-py-1-ch06-84

85. What library is used to read and write sound files?

1. `scipy.file.sound`
2. `scipy.file.wavfile`
3. `scipy.io.sound`
4. `scipy.io.wavfile`

Title

What library is used to read and write sound files?

type

mc

Section

6.5 Problem Solving: Adapting Algorithms

id

testbank-py-2-ch06-85

86. What is stored in `contents` when a sound file is read by the `scipy` library using the following statement?

```
contents = scipy.io.wavfile.read("meow.wav")
```

1. A list of integers
2. A `numPy` array
3. A tuple containing the sample rate and a `NumPy` array
4. A tuple containing the sample rate and a list of integers

Title

What is returned when a sound file is read by the `scipy` library?

type

mc

Section

6.5 Problem Solving: Adapting Algorithms

id

testbank-py-2-ch06-86

87. Which statement creates a new, empty list?

1. `data = 0`
2. `data = .`
3. `data = ()`
4. `data = []`

Title

Which statement creates a new, empty list?

type

mc

Section

6.1 Basic Properties of Lists

id

testbank-py-2-ch06-87

88. Consider the following code segment:

```
x = [5, 3, 7]
y = sorted(x)
print(x)
```

What is displayed when it executes?

1. []
2. [3, 5, 7]
3. [5, 3, 7]
4. [7, 5, 3]

Title

What output is generated by a code segment involving lists?

type

mc

Section

6.2 List Operations

id

testbank-py-2-ch06-88

89. Consider the following code segment:

```
x = [5, 3, 7]
y = x.pop()
print(y)
```

What is displayed when it executes?

1. 5
2. 7
3. [3, 7]
4. [5, 3]

Title

What output is generated by a code segment involving lists?

type

mc

Section

6.2 List Operations

id

testbank-py-2-ch06-89

90. Consider the following code segment:

```
x = [5, 3, 7, 9, 1]
y = x[2 : 4]
print(y)
```

What is displayed when it executes?

1. [3, 7]
2. [7, 9]
3. [3, 7, 9]
4. [7, 9, 1]

Title

What output is generated by a code segment involving a slice?

type

mc

Section

6.2 List Operations

id

testbank-py-2-ch06-90

91. Consider the following code segment:

```
x = [5, 3, 7, 9, 1]
y = x[3 : ]
print(y)
```

What is displayed when it executes?

1. [9]
2. [9, 1]
3. [3, 7, 9, 1]
4. [5, 3, 7, 9]

Title

What output is generated by a code segment involving a slice?

type

mc

Section

6.2 List Operations

id

testbank-py-2-ch06-91

92. Consider the following code segment:

```
x = [5, 3, 7, 9, 1]
y = x[ : 2]
print(y)
```

What is displayed when it executes?

1. 7
2. [7]
3. [5, 3]
4. [5, 3, 7]

Title What output is generated by a code segment involving a slice?  
type mc  
Section 6.2 List Operations  
id testbank-py-2-ch06-92