1. What statement is used to implement a decision?
   A. while
   B. if
   C. for
   D. import

Section	3.1 The if statement
Title	What is a decision statement?
type	mc
section	3.1 The if Statement
id	testbank-py-1-ch03-01

2. What are the two parts of an if statement?
   A. A condition and a body
   B. A check and an increment
   C. An increment and a body
   D. An increment and a return value

Section	3.1 The if statement
Title	What are the two parts of an if statement?
type	mc
section	3.1 The if Statement
id	testbank-py-1-ch03-02

3. Which of the following statements is true about the if statement?
   A. The `if` statement can have only one condition that evaluates to an integer value.
   B. The `if` block is optional.
   C. The `else` block is optional.
   D. The `if` and `else` blocks can be aligned to any indentation level.

Section	3.1 The if statement
Title	Which statement is true about the if statement
type	mc
section	3.1 The if Statement
id	testbank-py-1-ch03-03

4. Which of the following is the correct syntax for an if statement?

   A.
   ```
   if (x < 10) size = "small";
   ```

   B.
   ```
   if (x < 10)
     size = "small"
   else (x < 20)
     size = "medium"
   ```

   C.
   ```
   if x < 10 :
      size = "small"
   else :
      size = "medium"
   ```

   D.
   ```
   if x < 10 :
     size = "small"
   else
     size = "medium"
   ```

Section	3.1 The if statement

Title	What is the correct syntax for an if statement?
type	mc
section	3.1 The if Statement
id	testbank-py-1-ch03-04

5. Which of the following correctly identifies what is wrong with the code snippet below:

```
if y > 300 :
x = y
else :
x = 0
print("x:", x)
```

A. Nothing, the program runs as intended
B. The statement after the `if` statement must be indented
C. The statement after the `if` statement and the statement after the `else` statement must be indented
D. No colon is needed after the `else` statement

Section	3.1 The if statement
Title	What is the correct syntax for an if statement?
type	mc
section	3.1 The if Statement
id	testbank-py-1-ch03-05

6. Assuming that the user provides 303 as input, what is the output of the following code snippet?

```
y = int(input("Please enter a number: "))
if y > 300 :
   x = y
else :
   x = 0
print("x:", x)
```

A. `x: 0`
B. `x: 303`
C. `x: 300`
D. There is no output due to a syntax error.

Section	3.1 The if statement
Title	What is the output of an if/else statement given sample input value
type	mc
section	3.1 The if Statement
id	testbank-py-1-ch03-06

7. What is the output of the following code snippet if the `cost` contains 100:

```
if cost > 150 :
   discount = 0.8 * cost
else :
   discount = cost
print("Your cost is:", discount)
```

A. Nothing, the code contains a syntax error
B. `Your cost is: 0`
C. `Your cost is: 80`
D. `Your cost is: 100`

Section	3.1 The ifstatement

Title	What is the output of a conditional expression?
type	mc
section	3.1 The if Statement
id	testbank-py-1-ch03-10

8. Consider the following code segment:

```
if count > 0 :
   x = x + 1

print(x)
```

If `count` is initialized to -1 and `x` is initialized to 4 then the value displayed by this code segment is:

A. -1
B. 0
C. 4
D. 5

Section	3.1 The if Statement
Title	Trace an if statement
type	mc
section	3.1 The if Statement
id	testbank-py-1-ch03-11

9. Consider the following code segment:

```
numPizzas = 1
numPeople = 4

if numPeople == 5 :
   numPizzas = 2
```

After this code segment executes, what value is in the variable `numPizzas`?

A. 1
B. 2
C. 4
D. 5

Section	3.1 The if Statement
Title	Trace an if statement
type	mc
section	3.1 The if Statement
id	testbank-py-1-ch03-12

10. Consider the following code segment:

```
c = 2
b = 1

if b == 0 :
   c = c + 1
else :
   c = c - 1

print(c)
```

What value is printed by this code segment?

A. 1
B. 2
C. 3
D. 4

Section	3.1 The if Statement
Title	Trace an if/else statement
type	mc
section	3.1 The if Statement
id	testbank-py-1-ch03-13

11. Which statement about if statements is **not** correct?
    A. A compound statement requires a colon at the end of the header.
    B. All statements in a statement block must be indented to the same indentation level.
    C. Comments can be indented to any level.
    D. The statements in a statement block must be indented 2 spaces more than the header.

Section	3.1 The if Statement
Title	Which statement about if statements is not correct?
type	mc
section	3.1 The if Statement
id	testbank-py-2-ch03-117

12. The following code snippet contains an error. What is the error?

```
cost = int(input("Enter the cost: "))
if cost > 100
   cost = cost - 10
print("Discounted cost:", cost)
```

    A. Syntax error: missing colon after `if` statement
    B. Logical error: use of an uninitialized variable
    C. Syntax error: missing an `else` statement
    D. Syntax error: incorrect indentation

Section	3.1 The if statement
Title	Find the error in a code snippet containing an if statement
type	mc
from	testbank-py-1-ch03-07
section	3.1 The if Statement
id	testbank-py-2-ch03-07

13. Assuming that the user provides 95 as input, what is the output of the following code snippet?

```
y = int(input("Please enter a number: "))
if y > 300 :
   x = y
else :
   x = 0
print("x:", x)
```

    A. `x: 0`
    B. `x: 95`
    C. `x: 300`
    D. There is no output due to a syntax error

Section	3.1 The if statement
Title	What is the output of an if/else statement for a given input value?
type	mc
from	testbank-py-1-ch03-08
section	3.1 The if Statement
id	testbank-py-2-ch03-08

14. What is printed by the following code snippet if `itemCount` contains a value of 10 and `cost` contains 80:

```
if itemCount > 5 :
   discount = 0.8
   totalCost = cost * discount
   print("Total discounted price is:", totalCost)
```

A. Nothing, the program will run but not print any results
B. `Total discounted price is: 64.0`
C. `Total discounted price is: 0.0`
D. `Total discounted price is: 16.0`

Section	3.1 The if statement
Title	What is the output of a compound statement?
type	mc
from	testbank-py-1-ch03-09
section	3.1 The if Statement
id	testbank-py-2-ch03-09

15. What is the error in this statement?

```
if count = max :
   print("You win")
```

A. Equality is evaluated using two equal signs (`==`), not one.
B. The `print` function should not be indented
C. There must be an `else` statement
D. Nothing, if `count` equals `max`, it would print `"You win"`

Section	3.2 Relational Operators
Title	What is the error in this statement?
type	mc
section	3.2 Relational Operators
id	testbank-py-1-ch03-14

16. What is the opposite of this condition: `count > 10`?

A. `count >= 10`
B. `count < 9`
C. `count <= 10`
D. `count <= 9`

Section	3.2 Relational Operators
Title	What is the opposite of a conditional statement?
type	mc
section	3.2 Relational Operators
id	testbank-py-1-ch03-15

17. What is the output of the following code snippet if `count` contains 56?

```
if count % 2 == 0 :
   print("Count is an even number")
else :
```

```
print("Count is an odd number")
```

A. `Count is an even number`
B. `Count is an odd number`
C. Nothing, there is a syntax error
D. Nothing, the program runs but does not print any output

Section	3.2 Relational Operators
Title	What is the output of a code snippet with relational operators?
type	mc
section	3.2 Relational Operators
id	testbank-py-1-ch03-16

18. What is the output of the following code snippet if `count` contains 56?

```
if count % 2 == 0 :
   print("Count is an even number")
else :
   print("Count is an odd number")
```

A. `Count is an even number`
B. `Count is an odd number`
C. Nothing, there is a syntax error
D. Nothing, the program runs but does not print any output

Section	3.2 Relational Operators
Title	What is the output of a code snippet with relational operators?
type	mc
section	3.2 Relational Operators
id	testbank-py-1-ch03-17

19. What type of operator is `<=` operator?
A. Lexicographic
B. Arithmetic
C. Inequality
D. Relational

Section	3.2 Relational Operators
Title	What type of operator is !< operator?
type	mc
section	3.2 Relational Operators
id	testbank-py-1-ch03-18

20. The operator `>=` stands for
A. greater than
B. greater than or equal to
C. not equal to
D. this is not a valid Python operator

Section	3.2 Relational Operators
Title	Which relational operator is this?
type	mc
section	3.2 Relational Operators
id	testbank-py-1-ch03-19

21. Which statement correctly tests if the user entered the letter `Y`?
A. `if userInput = "y" :`
B. `if userInput = "Y" :`
C. `if userInput == "Y" :`

D. `if userInput == "y" :`

Section	3.2 Relational Operators
Title	Which statement correctly tests for a user input value?
type	mc
section	3.2 Relational Operators
id	testbank-py-1-ch03-20

22. Assuming the user enters 15 as input, what is the output of the following code snippet?

```
number = int(input("Please enter a number: "))
if number >= 20 :
   print("The numer is big")
else :
   print("The number is small")
```

A. There is no output due to a syntax error
B. `The number is big`
C. `The number is small`
D. The program runs successfully but does not print any output

Section	3.2 Relational Operators
Title	What is the output of a given code snippet and given input value?
type	mc
section	3.2 Relational Operators
id	testbank-py-1-ch03-21

23. What is the output of the following code snippet if the input is 34?

```
number = int(input("Please enter a number: "))
if number != 20 :
   number = number + 1
else :
   number = number - 1
print(number)
```

A. `34`
B. `33`
C. `35`
D. `36`

Section	3.2 Relational Operators
Title	What is the output of a given code snippet and given input value?
type	mc
section	3.2 Relational Operators
id	testbank-py-1-ch03-22

24. Assuming that the user enters a value of 45, what is the output of the following code snippet?

```
number = int(input("Please enter a number: "))
if number < 100 :
   number = number + 5
if number < 500 :
   number = number - 2
if number > 15 :
   number = number + 1
else :
   nmber = number - 1
print(number)
```

A. `105`
B. `45`
C. `43`
D. `49`

Section	3.2 Relational Operators
Title	What is the output of a code statement containing multiple if statements and a given input value?
type	mc
section	3.2 Relational Operators
id	testbank-py-1-ch03-23

25. In Python, which of the following orderings is used to compare strings?
    A. Semantic
    B. Alphabetic
    C. Syntatic
    D. Lexicographic

Section	3.2 Relational Operators
Title	Which ordering is used to compare strings?
type	mc
section	3.2 Relational Operators
id	testbank-py-1-ch03-26

26. Which of the following if statements is problematic because of the limited precision of floating-point numbers?
    A. `if 4 // 3 == 1 :`
    B. `if sqrt(2) * sqrt(2) == 2.0 :`
    C. `if "10" == 5 :`
    D. `if 4 <= 4 :`

Section	3.2 Relational Operators
Title	If statements and the limited precision of floating-point numbers
type	mc
section	3.2 Relational Operators
id	testbank-py-1-ch03-28

27. Consider the following code segment:

```
s1 = "CAT"
s2 = "cat"
```

    Which of the following if statements has a condition that evaluates to `True`?

    A. `if s1 == s2 :`
    B. `if s1 = s2 :`
    C. `if s1 < s2 :`
    D. `if s1 >= s2 :`

Section	3.2 Relational Operators
Title	Comparing strings with relational operators
type	mc
section	3.2 Relational Operators
id	testbank-py-1-ch03-29

28. Given the following list of strings, what is the correct order using lexicographic ordering: `"Ann", "amy", "Heather", "hanna", "joe", "john", "Leo", "Jim"` ?
    A. amy, Ann, hanna, Heather, Jim, joe, john, Leo

B. Ann, Heather, Jim, Leo, amy, hanna, joe, john
C. amy, hanna, joe, john, Ann, Heather, Jim, Leo
D. Leo, john, joe, Jim, Heather, hanna, Ann, amy

Section	3.2 Special Topic: Lexicographic Ordering of Strings
Title	Given a list of strings, what is the correct order using lexicographic ordering?
type	mc
section	3.2 Relational Operators
id	testbank-py-1-ch03-31

29. Which of the following is **not** an example of a relational operator?

A. `=`
B. `<`
C. `<=`
D. `!=`

Section	3.2 Relational Operators
Title	Which of the following is not an example of a relational operator?
type	mc
section	3.2 Relational Operators
id	testbank-py-2-ch03-118

30. Which expression is equivalent to the expression shown below?

```
floor - 1 < 13
```

A. `13 < floor - 1`
B. `13 >= floor - 1`
C. `floor < 12`
D. `floor - 1 <= 12`

Section	3.2 Relational Operators
Title	Which is expression is equivalent to the expression shown below?
type	mc
section	3.2 Relational Operators
id	testbank-py-2-ch03-119

31. A store provides a 10% discount on items with a price of at least $100. Otherwise, no discount is applicable. Which of the following DOES NOT correctly compute the discount amount when the item's price is stored in the `price` variable?

A.
```
discount = 0
if price >= 100 :
   discount = 0.10 * price
```

B.
```
discount = 0.10 * price
if price <= 100 :
   discount = 0
```

C.
```
discount = 0
if price >= 100 :
   discount = price / 10
```

D.
```
discount = 10
if price >= 100 :
```

```
        discount = 0.1 * price
    else :
        discount = 0
```

Section	3.2 Relational Operators
Title	Which statement DOES NOT correctly compute the discount?
type	mc
from	testbank-py-1-ch03-24
section	3.2 Relational Operators
id	testbank-py-2-ch03-24

32. Which of the following conditions is true, given that `num1` contains 3 and `num2` contains 4?
    A. `num1 + 1 < num2`
    B. `num1 + 1 > num2`
    C. `num1 + num2 != 7`
    D. `num1 - num2 <= 0`

Section	3.2 Relational Operators
Title	Which of the following conditions evaluates to True given two variables?
type	mc
from	testbank-py-1-ch03-25
section	3.2 Relational Operators
id	testbank-py-2-ch03-25

33. Which condition will cause the statement block of the if statement to execute only when `count` is 0?
    A. `if count = 0 :`
    B. `if count < 0 :`
    C. `if count =< 0 :`
    D. `if count == 0 :`

Section	3.2 Relational Operators
Title	Which condition will cause the statement block of the if statement to execute?
type	mc
from	testbank-py-1-ch03-27
section	3.2 Relational Operators
id	testbank-py-2-ch03-27

34. Which statement evaluates to `True` when comparing the two strings:

```
name1 = "Heather"
name2 = "hanna"
```

    A. `name1 == name2`
    B. `name1 > name2`
    C. `name1 < name2`
    D. Relational operators cannot be used to compare strings

Section	3.2
Title	Which statement evaluates to true when comparing two strings?
type	mc
from	testbank-py-1-ch03-30
section	3.2 Relational Operators
id	testbank-py-2-ch03-30

35. Assuming a user enters 30, 20, and 10 as the input values, what is the output of the following code snippet?

```
num1 = int(input("Enter a number: "))
num2 = int(input("Enter a number: "))
```

```
num3 = int(input("Enter a number: "))
if num1 > num2 :
   if num1 > num3 :
      print(num1)
   else :
      print(num3)
else :
   if num2 > num3 :
      print(num2)
   else :
      print(num3)
```

A. 0
B. 10
C. 20
D. 30

Section	3.3 Nested Branches
Title	What is the output of the nested if code snippet given three input values?
type	mc
section	3.3 Nested Branches
id	testbank-py-1-ch03-33

36. What is the output of the following code snippet?

```
num1 = 100
if num1 < 100 :
   if num1 < 50 :
      num1 = num1 - 5
   else :
      num1 = num1 - 10
else :
   if num1 > 150 :
      num1 = num1 + 5
   else :
      num1 = num1 + 10
print(num1)
```

A. 95
B. 100
C. 105
D. 110

Section	3.3 Nested Branches
Title	What is the output of an if/else code snippet?
type	mc
section	3.3 Nested Branches
id	testbank-py-1-ch03-35

37. Which of the following options refers to the technique of simulating program execution on a sheet of paper?
A. Compiling
B. Prototyping
C. Debugging
D. Tracing

Section	3.3 Nested Branches
Title	Which refers to the technique of simulating program execution on a sheet of paper?
type	mc
section	3.3 Nested Branches

id	testbank-py-1-ch03-36

38. Which of the following code segments is an example of a nested `if` statement?

A.
```
if a == b :
   print(a)
```

B.
```
if a == b :
   print(a)
else :
   print(b)
```

C.
```
if a == b :
   print(a)
   if c == d :
      print(c)
```

D. `a = a - 1 if a > 0 else a = a + 1`

Section	3.3 Nested Branches
Title	Which of the following is an example of a nested if statement?
type	mc
section	3.3 Nested Branches
id	testbank-py-1-ch03-38

39. Consider the following code segment:

```
if a > b :
   print("X")
   if a == b :
      print("Y")
```

What is displayed if `a` is 1 and `b` is 0?

A. `X`
B. `Y`
C. `X` followed by `Y` on the next line
D. Nothing

Section	3.3 Nested Branches
Title	Trace a nested if statement
type	mc
section	3.3 Nested Branches
id	testbank-py-1-ch03-39

40. Consider the following code segment:

```
if a > b :
   print("X")
   if a == b :
      print("Y")
```

What is displayed if `a` is 0 and `b` is 0?

A. `X`
B. `Y`
C. `X` followed by `Y` on the next line
D. Nothing

Section	3.3 Nested Branches
Title	Trace a nested if statement
type	mc
section	3.3 Nested Branches
id	testbank-py-1-ch03-40

41. Consider the following code segment:

```
if a > b :
   print("X")
   if a == b :
      print("Y")
```

What is displayed if `a` is 1 and `b` is 2?

A. `X`
B. `Y`
C. `X` followed by `Y` on the next line
D. Nothing

Section	3.3 Nested Branches
Title	Trace a nested if statement
type	mc
section	3.3 Nested Branches
id	testbank-py-1-ch03-41

42. Consider the following code segment:

```
if a == b :
   print("W")
else :
   print("X")
   if b == c :
      print("Y")
   else :
      print("Z")
```

If `a`, `b` and `c` are all 0 then the output generated by this code segment is:

A. `W`
B. `W` followed by `Y` on the next line
C. `X` followed by `Y` on the next line
D. `W` followed by `X` on the next line, followed by `Y` on the next line

Section	3.3 Nested Branches
Title	Trace nested if/else statements
type	mc
section	3.3 Nested Branches
id	testbank-py-1-ch03-42

43. Consider the following code segment:

```
if a == b :
   print("W")
else :
   print("X")
   if b == c :
      print("Y")
   else :
```

```
      print("Z")
```

If a is 0, b is 1 and c is 0 then the output generated by this code segment is:

A. W
B. X
C. X followed by Y on the next line
D. X followed by Z on the next line

Section	3.3 Nested Branches
Title	Trace nested if/else statements
type	mc
section	3.3 Nested Branches
id	testbank-py-1-ch03-43

44. Consider the following code segment:

```
if a == b :
   print("W")
else :
   print("X")
   if b == c :
      print("Y")
   else :
      print("Z")
```

If a is 0, b is 1 and c is 1 then the output generated by this code segment is:

A. W
B. X
C. X followed by Y on the next line
D. X followed by Z on the next line

Section	3.3 Nested Branches
Title	Trace nested if/else statements
type	mc
section	3.3 Nested Branches
id	testbank-py-1-ch03-44

45. What error will Python display when it attempts to execute the following if/else statement?

```
if a == b :
   print("Equal")
else :
   print("Not Equal")
      if a > b :
         print("a is larger")
      else :
         print("b is larger")
```

A. Python will display an error indicating that == should be replaced with =
B. Python will display an error indicating that an if statement cannot reside inside the body of an else
C. Python will display an error indicating that there is a problem with the indentation
D. No error will be displayed

Section	3.3 Nested Branches
Title	Find the error in an if statement

type	mc
section	3.3 Nested Branches
id	testbank-py-1-ch03-45

46. What error will Python display when it attempts to execute the following if/else statement?

```
if a = b :
   print("Equal")
else :
   print("Not Equal")
   if a > b :
      print("a is larger")
   else :
      print("b is larger")
```

A. Python will display an error indicating that = is invalid sytax
B. Python will display an error indicating that an if statement cannot reside inside the body of an else
C. Python will display an error indicating that there is a problem with the indentation
D. No error will be displayed

Section	3.3 Nested Branches
Title	Find the error in an if statement
type	mc
section	3.3 Nested Branches
id	testbank-py-1-ch03-46

47. What is the definition of a nested statement?
A. A decision statement that is contained inside the statement block of another decision statement
B. A compound statement that consists of a header and a statement block
C. A decision statement that immediately follows another decision statement at the same indentation level
D. A statement that is used to validate user input

Section	3.3 Nested Branches
Title	What is the definition of a nested statement?
type	mc
from	testbank-py-1-ch03-32
section	3.3 Nested Branches
id	testbank-py-2-ch03-32

48. Assuming that a user enters 25 for the price of an item, which of the following hand-trace tables is valid for the given code snippet?

```
price = 0
status = ""
price = float(input("Enter the price for your item: "))
if price >= 50 :
   status = "reasonable"
   if price >= 75 :
      status = "costly"
else :
   status = "inexpensive"
   if price <= 25 :
      status = "cheap"
```

A.

price	status
0	"inexpensive"

B.

25	"cheap"

B.

price	status
0	"inexpensive"
25	"reasonable"

C.

price	status
0	"inexpensive"
25	"reasonable"
	"costly"

D.

price	status
0	"inexpensive"
25	"costly"

Section	3.3 Nested Branches
Title	Which hand-trace table is valid for this snippet?
type	mc
from	testbank-py-1-ch03-37
section	3.3 Nested Branches
id	testbank-py-2-ch03-37

49. What is the output of the following code snippet when the user enters 75 as the grade?

```
grade = int(input("Enter student grade: "))
if grade >= 90 :
   letterGrade = "A"
if grade >= 80 :
   letterGrade = "B"
if grade >= 70 :
   letterGrade = "C"
if grade >= 60 :
   letterGrade = "D"
else :
   letterGrade = "E"
print(letterGrade)
```

A. A
B. B
C. C
D. D

Section	3.4 Multiple Alternatives
Title	What is the output of an if statement with multiple alternatives?
type	mc
section	3.4 Multiple Alternatives
id	testbank-py-1-ch03-47

50. What is the wrong with the following code snippet?

```
grade = int(input("Enter student grade: "))
if grade >= 90 :
   letterGrade = "A"
if grade >= 80 :
   letterGrade = "B"
if grade >= 70 :
   letterGrade = "C"
if grade >= 60 :
```

```
   letterGrade = "D"
else :
   letterGrade = "E"
print(letterGrade)
```

A. Everyone will get an "E"
B. Anyone with a grade higher than 60 will receive a "D"
C. Nothing is wrong, students will get the correct grade
D. The code block will not compile

Section	3.4 Multiple Alternatives
Title	What is the wrong with the code snippet that has multiple alternatives?
type	mc
section	3.4 Multiple Alternatives
id	testbank-py-1-ch03-48

51. What is the output of the following code snippet?

```
x = 20
if x <= 20 :
   print("1", end="")
if x <=40 :
   print("2", end="")
if x <= 30 :
   print("3", end="")
```

A. 1
B. 2
C. 3
D. 123

Section	3.4 Multiple Alternatives
Title	What is the output of the following code snippet?
type	mc
section	3.4 Multiple Alternatives
id	testbank-py-1-ch03-50

52. Consider the following code snippet:

```
number = int(input("Enter a number: "))
if number > 30 :
   ...
elif number > 20 :
   ...
elif number > 10 :
   ...
else :
   ...
```

Assuming that the user input is 40, which block of statements is executed?

A. `if number > 30 : ...`
B. `else if number > 20 : ...`
C. `else if number > 10 : ...`
D. `else : ...`

Section	3.4 Multiple Alternatives
Title	Which statement is executed when the user enters 40 for the input value?
type	mc
section	3.4 Multiple Alternatives

id	testbank-py-1-ch03-51

53. Consider the following code snippet:

```
number = int(input("Enter a number: "))
if number < 10 :
   print("Too small")
elif number < 50 :
   print("Intermediate")
elif number < 100 :
   print("High")
else :
   print("Too high")
```

Assuming that the user input is 60, what is the output of the this code snippet?

A. `Too high`
B. `High`
C. `Intermediate`
D. `Too small`

Section	3.4 Multiple Alternatives
Title	What is output of the if/elif/else snippet with this input?
type	mc
section	3.4 Multiple Alternatives
id	testbank-py-1-ch03-52

54. Consider the following code snippet.

```
num1 = 0
num2 = 0
num3 = 0
num4 = 0
num5 = 0
num1 = int(input("Enter a number: "))
num2 = int(input("Enter a number: "))
if num1 < num2 :
   num3 = num1
else :
   num3 = num2

if num1 < num2 + 10 :
   num4 = num1
elif num1 < num2 + 20 :
   num5 = num1
print("num1 =", num1, "num2 =", num2, "num3 =", num3,
      "num4 =", num4, "num5 =", num5)
```

Assuming that the user enters the numbers 20 and 12 as the two input values, what is the output of the code snippet?

A. `num1 = 20 num2 = 12 num3 = 20 num4 = 0 num5 = 20`
B. `num1 = 20 num2 = 12 num3 = 12 num4 = 20 num5 = 0`
C. `num1 = 20 num2 = 12 num3 = 12 num4 = 0 num5 = 20`
D. `num1 = 20 num2 = 12 num3 = 20 num4 = 20 num5 = 0`

Section	3.4 Multiple Alternatives
Title	What is output of the if/else and if/elif snippet with two input values?
type	mc
section	3.4 Multiple Alternatives
id	testbank-py-1-ch03-53

55. What is the value of the price variable after the following code snippet is executed?

```
price = 42
if price < 40 :
   price = price + 10
if price > 30 :
   price = price * 2
if price < 100 :
  price = price - 20
```

A. 42
B. 52
C. 84
D. 64

Section	3.4 Multiple Alternatives
Title	What is value of a variable after (if/if/if) snippet is executed?
type	mc
section	3.4 Multiple Alternatives
id	testbank-py-1-ch03-54

56. Consider the following code snippet:

```
age = int(input("Enter your age: "))
if age < 10 :
   print("Child")
if age < 30 :
   print("Young Adult")
if age < 70 :
   print("Old")
if age < 100 :
   print("Impressively old")
```

Assuming that the user inputs 80 as the age, what is the output?

A.
```
Child
Young adult
Old
```

B.
```
Young adult
Old
```

C.
```
Impressively old
```

D.
```
Child
Young adult
Old
Impressive old
```

Section	3.4 Multiple Alternatives
Title	What is output of the code snippet with this input?
type	mc
section	3.4 Multiple Alternatives
id	testbank-py-1-ch03-55

57. Consider the follow code segment. It is supposed to convert numeric marks to letter grades. However,

it may contain a bug. Examine the program, and identify what bug, if any, is present.

```
grade = "F"
if mark >= 80 :
   grade = "A"
if mark >= 70 :
   grade = "B"
if mark >= 60 :
   grade = "C"
if mark >= 50 :
   grade = "D"
```

A. The greater than or equal signs need to be replaced with equal signs
B. All instances of if, except the first, need to be replaced with elif
C. All instances of if, except the first, need to be replaced with else
D. There is nothing wrong with the code segment (it works as intended)

Section	3.4 Multiple Alternatives
Title	What is wrong with this multiple alternatives statement?
type	mc
section	3.4 Multiple Alternatives
id	testbank-py-1-ch03-58

58. Consider the follow code segment. It is designed to classify widgets as too small if they are less than 10mm in diameter or too large if they are 15mm in diameter or more. Otherwise they should be classified as just right. However, this code may contain a bug. Examine the program, and identify what bug, if any, is present.

```
if size >= 0 :
   print("Too small")
elif size >= 10 :
   print("Just right")
elif size >= 15 :
   print("Too big")
```

A. The greater than or equal signs need to be replaced with greater than signs
B. All instances of elif need to be replaced with else
C. The order of the conditions (and bodies) must be changed
D. There is nothing wrong with the code segment (it works as intended)

Section	3.4 Multiple Alternatives
Title	What is wrong with this multiple alternatives statement?
type	mc
section	3.4 Multiple Alternatives
id	testbank-py-1-ch03-59

59. Consider the following code segment. It is designed to convert letter grades to grade points. Examine the program, and identify what bug, if any, is present.

```
if letter == "A" :
   gradePoints = 4.0
elif letter == "B" :
   gradePoints = 3.0
elif letter == "C" :
   gradePoints = 2.0
elif letter == "D" :
   gradePoints = 1.0
else :
```

```
gradePoints = 0.0
```

A. The double equal signs need to be replaced with greater than or equal signs
B. All instances of elif need to be replaced with else
C. The order of the conditions (and bodies) must be changed
D. There is nothing wrong with the code segment (it works as intended)

Section	3.4 Multiple Alternatives
Title	What is wrong with this multiple alternatives statement?
type	mc
section	3.4 Multiple Alternatives
id	testbank-py-1-ch03-60

60. Assume that the following import statements appear at the beginning of your program:

```
from email.mime.multipart import MIMEMultipart
from email.mime.text import MIMEText
from email.mime.image import MIMEImage
from email.mime.application import MIMEApplication
```

Which statement creates a new email message that can contain both text and images?

A. `msg = MIMEApplication()`
B. `msg = MIMEImage()`
C. `msg = MIMEMultipart()`
D. `msg = MIMEText()`

Section	3.4 Multiple Alternatives
Title	Which statement creates a new email message that can contain both text and images?
type	mc
section	3.4 Multiple Alternatives
id	testbank-py-2-ch03-113

61. Which part of an email message includes information about the sender and the recipient?

A. The application
B. The attachment
C. The footer
D. The header

Section	3.4 Multiple Alternatives
Title	Which part of an email message includes information about the sender and the recipient?
type	mc
section	3.4 Multiple Alternatives
id	testbank-py-2-ch03-114

62. What type of object needs to be created to attach a PDF file to an email message?

A. `MIMEApplication`
B. `MIMEDocument`
C. `MIMEImage`
D. `MIMEPDF`

Section	3.4 Multiple Alternatives
Title	What type of object needs to be created to attach a PDF file to an email message?
type	mc
section	3.4 Multiple Alternatives
id	testbank-py-2-ch03-115

63. What library needs to be imported to send a message after it has been created?

A. `email`
B. `login`

C. `mimelib`
D. `smtplib`

Section	3.4 Multiple Alternatives
Title	What library needs to be imported to send a message after it has been created?
type	mc
section	3.4 Multiple Alternatives
id	testbank-py-2-ch03-116

64. Which type of statement should be used to choose exactly one of several alternatives?
A. if
B. if-elif
C. if-else
D. if-elif-else

Section	3.4 Multiple Alternatives
Title	Which type of statement should be used to choose exactly one of several alternatives?
type	mc
section	3.4 Multiple Alternatives
id	testbank-py-2-ch03-120

65. Given that the following code is incorrect, what code would fix the following code snippet?

```
grade = int(input("Enter student grade: "))
if grade >= 90 :
   letterGrade = "A"
if grade >= 80 :
   letterGrade = "B"
if grade >= 70 :
   letterGrade = "C"
if grade >= 60 :
   letterGrade = "D"
else :
   letterGrade = "E"
print(letterGrade)
```

A. Change the `if` statements to `elif` statements (except the first one)
B. Change the `if` statements to `else` statements (except the first one)
C. Reverse the order of the `if` statements
D. Change the last statement to `if` instead of `else`

Section	3.4 Multiple Alternatives
Title	How can you correct a code snippet that has multiple alternatives?
type	mc
from	testbank-py-1-ch03-49
section	3.4 Multiple Alternatives
id	testbank-py-2-ch03-49

66. Consider the following code snippet:

```
age = int(input("Enter your age:"))
if age < 10 :
   print("Child", end="")
if age < 30 :
   print("Young Adult", end="")
if age < 70 :
   print("Old", end="")
if age < 100 :
   print("Impressively old", end="")
```

Assuming that the user inputs 30 as the age, what is the output?

A. `ChildYoung adultOldImpressively old`
B. `Young adultOldImpressively old`
C. `OldImpressively old`
D. `Impressively old`

Section	3.4 Multiple Alternatives
Title	What is output of the code snippet with this input?
type	mc
section	3.4 Multiple Alternatives
id	testbank-py-1-ch03-56

67. Consider the following code snippet:

```
age = int(input("Enter your age: "))
if age < 10 :
   print("Child", end="")
if age < 30 :
   print("Young Adult", end="")
if age < 70 :
   print("Old", end="")
if age < 100 :
   print("Impressively old", end="")
```

Assuming that the user inputs 5 as the age, what is the output?

A. `Child`
B. `ChildYoung Adult`
C. `ChildYoung AdultOld`
D. `ChildYoung adultOldImpressively old`

Section	3.4 Multiple Alternatives
Title	What is output of the code snippet with this input?
type	mc
from	testbank-py-1-ch03-57
section	3.4 Multiple Alternatives
id	testbank-py-2-ch03-57

68. Flowcharts are made up of all the following elements, EXCEPT:

A. elements for tasks
B. elements for input/output
C. elements for pseudocode
D. elements for decisions

Section	3.5 Problem Solving: Flowcharts
Title	What are the parts of a flowchart?
type	mc
section	3.5 Problem Solving: Flowcharts
id	testbank-py-1-ch03-61

69. The flowchart shows the order in which steps should be executed, and the diamond-shaped boxes indicate:

A. input
B. algorithms
C. tasks
D. decision statements

Section	3.5 Problem Solving: Flowcharts
Title	What are the parts of a flowchart?
type	mc

section	3.5 Problem Solving: Flowcharts
id	testbank-py-1-ch03-62

70. A messy network of possible pathways through a program is referred to as:
    A. knotted logic
    B. spaghetti code
    C. twisted conditions
    D. zigzag functions

Section	3.5 Problem Solving: Flowcharts
Title	A messy network of possible pathways through a program is referred to as:
type	mc
section	3.5 Problem Solving: Flowcharts
id	testbank-py-2-ch03-121

71. When testing code for correctness, it always makes sense to
    A. Aim for complete coverage of all decision points
    B. Identify boundary cases and test them
    C. Check all cases using hand-tracing
    D. Assume invalid input will never occur

Section	3.6 Problem Solving: Test Cases
Title	What is reasonable for checking/testing code?
type	mc
section	3.6 Problem Solving: Test Cases
id	testbank-py-1-ch03-63

72. Consider the following code segment:

```
if a == 0 :
   print("a is 0")
elif a < 0 :
   print("a is less than 0")
else :
   print("a is greater than 0")
```

What is the minimum number of test cases needed to test every line of code in this segment?

    A. 2
    B. 3
    C. 4
    D. 5

Section	3.6 Problem Solving: Test Cases
Title	How many test cases are needed to test every line of code in this segment?
type	mc
section	3.6 Problem Solving: Test Cases
id	testbank-py-1-ch03-64

73. Which operators listed below are considered boolean operators:
    A. `<` / `>`
    B. `and` / `or`
    C. `==` / `!=`
    D. `<=` / `>=`

Section	3.7 Boolean Variables and Operators
Title	What are boolean operators?
type	mc
section	3.7 Boolean Variables and Operators

id	testbank-py-1-ch03-66

74. Consider the following code snippet:

```
emp = int(input("Enter Celsius temperature: "))
if temp > 0 and temp < 100 :
   print("Liquid")
if temp <= 0 or temp >= 100 :
   print("Not liquid")
```

Assuming the user enters a value of 120, what will be the output:

A. Nothing is printed
B. `Liquid`
C. `Not Liquid`
D. `LiquidNotLiquid`

Section	3.7 Boolean Variables and Operators
Title	Given a code snippet and an input value, what output is produced?
type	mc
section	3.7 Boolean Variables and Operators
id	testbank-py-1-ch03-67

75. Which of the following variables is used to store a condition that can be either `True` or `False`?

A. Logical
B. Boolean
C. Algebraic
D. Conditional

Section	3.7 Boolean Variables and Operators
Title	What kind of variable is used to store a true/false condition?
type	mc
section	3.7 Boolean Variables and Operators
id	testbank-py-1-ch03-68

76. Rewrite the following algebraic expression to an equivalent Python expression:

32 <= temp <= 100

A. `if temp <= 32 and temp <= 100`
B. `if temp <= 32 or temp <= 100`
C. `if temp >= 32 and temp <= 100`
D. `if temp >= 32 or temp <= 100`

Section	3.7 Boolean Variables and Operators
Title	Rewrite an algebraic expression into the equivelant Python expression?
type	mc
section	3.7 Boolean Variables and Operators
id	testbank-py-1-ch03-71

77. What value causes the following logical expression to 'short-circuit'?

```
if temp >= 32 and temp <= 100
```

A. `temp = 0`
B. `temp = 32`
C. `temp = 100`
D. `temp = 75`

Section	3.7 Boolean Variables and Operators

Title	What value causes a given expression to short-circuit?
type	mc
section	3.7 Boolean Variables and Operators
id	testbank-py-1-ch03-72

78. Using De Morgan's law, what is the equivalent to this statement?

```
if not (state == "PA" or state == "OH")
```

A. `if state != "PA" and state != "OH"`
B. `if state != "PA" or state != "OH"`
C. `if state == "PA" and state == "OH"`
D. `if state == "PA" or state == "OH"`

Section	3.7 Boolean Variables and Operators
Title	Using De Morgan's law, identify an equivalent expression?
type	mc
section	3.7 Boolean Variables and Operators
id	testbank-py-1-ch03-74

79. Using De Morgan's law, what is the equivalent to this statement?

```
if not (state == "PA" and state == "OH")
```

A. `if state != "PA" and state != "OH"`
B. `if state != "PA" or state != "OH"`
C. `if state == "PA" and state == "OH"`
D. `if state == "PA" or state == "OH"`

Section	3.7 Boolean Variables and Operators
Title	Using De Morgan's law, identify an equivelant expression?
type	mc
section	3.7 Boolean Variables and Operators
id	testbank-py-1-ch03-75

80. Consider the following code snippet:

```
attendance = True
failed = False
```

Which of the following `if` statements include a condition that evaluates to `True`?

A. `if attendance == "true" :`
B. `if attendance :`
C. `if failed :`
D. `if attendance == failed :`

Section	3.7 Boolean Variables and Operators
Title	What if statements include a condition that evaluates to true?
type	mc
section	3.7 Boolean Variables and Operators
id	testbank-py-1-ch03-76

81. Consider the following code snippet:

```
age = int(input("Enter your age: "))
if age < 13 :
   print("Child", end="")
if age >= 13 and age <= 19 :
   print("Teen", end="")
```

```
if age > 19 and age < 30 :
   print("Young adult", end="")
if age >= 30 and age <= 50 :
   print("Adult", end="")
if age > 50 :
   print("Young at heart", end="")
```

Assuming that the user enters 55 as the age, what is the output?

A. `Teen`
B. `Young at heart`
C. `Child`
D. `Adult`

Section	3.7 Boolean Variables and Operators
Title	What is output of the code snippet with this input?
type	mc
section	3.7 Boolean Variables and Operators
id	testbank-py-1-ch03-77

82. Given the following code snippet:

```
grade = int(input("Enter student grade: "))
if grade >= 90 :
   letterGrade = "A"
elif grade >= 80 and grade < 90 :
   letterGrade = "B"
elif grade >= 70 and grade < 80 :
   letterGrade = "C"
elif grade >= 60 and grade < 70 :
   letterGrade = "D"
else :
   letterGrade = "E"
print(letterGrade)
```

what is value of `grade` when the user enters 75?

A. `"A"`
B. `"B"`
C. `"C"`
D. `"D"`

Section	3.7 Boolean Variables and Operators
Title	What is the output of a code snippet given a specific input value?
type	mc
section	3.7 Boolean Variables and Operators
id	testbank-py-1-ch03-80

83. Which of the following operators is used to invert a conditional statement?

A. or
B. and
C. not
D. equal

Section	3.7 Boolean Variables and Operators
Title	Which operator is used to invert a conditional statement?
type	mc
section	3.7 Boolean Variables and Operators
id	testbank-py-1-ch03-81

84. Given that the following code snippet:

```
isFelon = False
answer = input("have you ever committed a felony? ")
if answer == "Yes" or answer == "yes" :
   isFelon = True
age = int(input("what is your age? "))
```

which statement assigns the variable `mayVote` a value of `True` if a person may vote if they are 18 or older and not a felon?

A. `mayVote = age > 18 or not isFelon`
B. `mayVote = not ( age >= 18 and isFelon)`
C. `mayVote = age >= 18 and not isFelon`
D. `mayVote = not ( age >= 18 or isFelon)`

Section	3.7 Boolean Variables and Operators
Title	Which of the following statements assigns the Boolean variable correctly?
type	mc
section	3.7 Boolean Variables and Operators
id	testbank-py-1-ch03-83

85. Given the following code snippet:

```
MIN_SPEED = 45
MAX_SPEED = 65
speed = 55
if not (speed < MAX_SPEED) :
   speed = speed - 10
if not (speed > MIN_SPEED) :
   speed = speed + 10
print(speed)
```

what output is produced?

A. `45`
B. `55`
C. `65`
D. `50`

Section	3.7 Boolean Variables and Operators
Title	What is the output of a Boolean not code snippet?
type	mc
section	3.7 Boolean Variables and Operators
id	testbank-py-1-ch03-84

86. Given the following code snippet:

```
score = 0
price = 100.0
if score > 0 and price < 200 and price / score > 10 :
   print("buy!")
```

which of the following statements is true?

A. The output is `buy!`
B. The code snippet runs, but there is no output
C. The code snippet has syntax errors
D. The code snippet causes a divide-by-zero exception

Section	3.7 Boolean Variables and Operators
Title	Which statement is true on the basis of this code snippet?

type	mc
section	3.7 Boolean Variables and Operators
id	testbank-py-1-ch03-85

87. Which of the following options checks that `city` is neither Atlanta or Philadelphia?

A. `if not city == "Atlanta" or not city == "Philadelphia"`
B. `if not (city == "Atlanta" or city == "Philadelphia")`
C. `if not (city == "Atlanta" and city == "Philadelphia")`
D. `if not city == "Atlanta" or city == "Philadelphia"`

Section	3.7 Boolean Variables and Operators
Title	Which of the following options checks that city is neither Atlanta or Philadelphia?
type	mc
section	3.7 Boolean Variables and Operators
id	testbank-py-1-ch03-86

88. Assuming a user enters 30, 55, and 10 as the input, what is the output of the following code snippet?

```
num1 = int(input("Enter a number: "))
num2 = int(input("Enter a number: "))
num3 = int(input("Enter a number: "))
if not (num1 > num2 and num1 > num3) :
   print(num1)
elif not(num2 > num1 and num2 > num3) :
   print(num2)
elif not (num3 > num1 and num3 > num2) :
   print(num3)
```

A. 55
B. 10
C. 0
D. 30

Section	3.7 Boolean Variables and Operators
Title	What is the output of the nested if code snippet given three input values?
type	mc
section	3.7 Boolean Variables and Operators
id	testbank-py-1-ch03-87

89. Assuming a user enters 30, 55, and 10 as the input, what is the output of the following code snippet?

```
num1 = int(input("Enter a number: "))
num2 = int(input("Enter a number: "))
num3 = int(input("Enter a number: "))
if num1 > num2 and num1 > num3 :
   print(num1)
elif num2 > num1 and num2 > num3 :
   print(num2)
elif num3 > num1 and num3 > num2 :
   print(num3)
```

A. 55
B. 10
C. 0
D. 30

Section	3.7 Boolean Variables and Operators
Title	What is the output of the nested if code snippet given three input values?
type	mc

section	3.7 Boolean Variables and Operators
id	testbank-py-1-ch03-88

90. Which of the following conditions is `True` only when the variables `a`, `b`, and `c` contain three different values?

    A. `if a != b and a != c and b != c :`
    B. `if a != b or a != c or b != c :`
    C. `if not (a == b and b == c and a == c) :`
    D. `if a != b != c :`

Section	3.7 Boolean Variables and Operators
Title	Which of the following conditions is true only when the variables a, b, and c contain three different values?
type	mc
section	3.7 Boolean Variables and Operators
id	testbank-py-1-ch03-89

91. Consider the following code segment. It should display a message only if the cost is between 50 and 75 dollars. The message should also be displayed if the cost is exactly 50 dollars or exactly 75 dollars.

```
if _________________ :
  print("The cost is in the desired range")
```

    What condition should be placed in the blank to achieve the desired behavior?

    A. `cost > 50`
    B. `cost < 75`
    C. `cost >= 50 and cost <= 75`
    D. `cost >= 50 or cost <= 75`

Section	3.7 Boolean Variable and Operators
Title	Complete an if statement with an appropriate condition
type	mc
section	3.7 Boolean Variables and Operators
id	testbank-py-1-ch03-90

92. Water is liquid between 0 and 100 degrees Celsius. The following code segment should display a message if the water is **not** liquid. For this question, we will assume that water is liquid if it is exactly 0 degrees or exactly 100 degrees.

```
if _________________ :
  print("The water is not liquid")
```

    What condition should be placed in the blank to achieve the desired behavior?

    A. `temp < 0`
    B. `temp > 100`
    C. `temp < 0 and temp > 100`
    D. `temp < 0 or temp > 100`

Section	3.7 Boolean Variables and Operators
Title	Complete an if statement with an appropriate condition
type	mc
section	3.7 Boolean Variables and Operators
id	testbank-py-1-ch03-91

93. Suppose that `b` is `False` and `x` is 0. Which of the following expressions evaluates to `True`?

A. `b or x == 1`
B. `b and x == 0`
C. `not b and x == 1`
D. `not b or x == 1`

Section	3.7 Boolean Variables and Operators
Title	Which of the following expressions evaluates to True?
type	mc
section	3.7 Boolean Variables and Operators
id	testbank-py-1-ch03-92

94. Suppose that `b` is `False` and `x` is 0. Which of the following expressions evaluates to `True`?

A. `not b and x == 1`
B. `b or x == -1`
C. `not b or b`
D. `x == 1 or x == -1`

Section	3.7 Boolean Variables and Operators
Title	Which of the following expressions evaluates to True?
type	mc
section	3.7 Boolean Variables and Operators
id	testbank-py-1-ch03-93

95. Which operator has the lowest precedence?

A. `!=`
B. `*`
C. `**`
D. `and`

Section	3.7 Boolean Variables and Operators
Title	Which operator has the lowest precedence?
type	mc
section	3.7 Boolean Variables and Operators
id	testbank-py-2-ch03-122

96. Which of the following values make the expression `not x == y and z > x` true?

A. `x = 10, y = 10, z = 15`
B. `x = 10, y = 20, z = 15`
C. `x = 10, y = 2, z = 5`
D. `x = 10, y = 20, z = 10`

Section	3.7 Boolean Variables and Operators
Title	Which of the following values make the expression not x == y and z > x true?
type	mc
from	testbank-py-1-ch03-34
section	3.7 Boolean Variables and Operators
id	testbank-py-2-ch03-34

97. What two values does the Boolean (`bool`) data type have in Python?

A. Yes / No
B. True / False
C. 0 / 1
D. -1 / 1

Section	3.7 Boolean Variables and Operators
Title	What are the values of a boolean variable?
type	mc
from	testbank-py-1-ch03-65
section	3.7 Boolean Variables and Operators
id	testbank-py-2-ch03-65

98. Given two variables x and y, how do you test whether exactly one of them is zero?

A. `if x == 0 or y == 0 :`
B. `if x = 0 or y = 0 :`
C. `if x == 0 and y != 0 or y == 0 and x != 0 :`
D. `if x == 0 and y != 0 and y == 0 and x != 0 :`

Section	3.7 Boolean Variables and Operators
Title	Given a code snippet, determine the correct boolean expression to test for a given condition?
type	mc
from	testbank-py-1-ch03-69
section	3.7 Boolean Variables and Operators
id	testbank-py-2-ch03-69

99. Given two variables x and y, how do you test whether at least one of them is zero?

A. `if x == 0 or y == 0 :`
B. `if x = 0 or y = 0 :`
C. `if x == 0 and y != 0 or y == 0 and x != 0 :`
D. `if x == 0 and y != 0 and y == 0 and x != 0 :`

Section	3.7 Boolean Variables and Operators
Title	Given a code snippet, determine the correct boolean expression to test for a given condition?
type	mc
from	testbank-py-1-ch03-70
section	3.7 Boolean Variables and Operators
id	testbank-py-2-ch03-70

100. The following logical expression will 'short-circuit'...

```
quantity > 0 and price/quantity < 10
```

A. When `quantity` is equal to 0
B. When `quantity` is equal to 5
C. When `price/quantity` is less than 10
D. When `price/quantity` is greater than 10

Section	3.7 Boolean Variables and Operators
Title	What value causes a given expression to short-circuit?
type	mc
from	testbank-py-1-ch03-73
section	3.7 Boolean Variables and Operators
id	testbank-py-2-ch03-73

101. Which of the following expressions represents a legal way of checking whether a value assigned to the `num` variable falls within the range 0 to 150 (inclusive)?

A. `if num >= 150 and num <= 0 :`
B. `if num >= 0 and num <= 150 :`
C. `if num >= 0 or num <= 150 :`
D. `if num >= 150 or num <= 0 :`

Section	3.7 Boolean Variables and Operators
Title	Which expression checks whether a value falls between 0 and 150 inclusive?
type	mc
from	testbank-py-1-ch03-78
section	3.7 Boolean Variables and Operators
id	testbank-py-2-ch03-78

102. Which of the following expressions represents a legal way of checking whether a value assigned to the `num` variable is either less than 100 or more than 200?

A. `if num < 100 and num > 200 :`
B. `if num < 100 and num > 200 :`
C. `if num < 100 or num > 200 :`
D. `if num <= 100 or num >= 200 :`

Section	3.7 Boolean Variables and Operators
Title	Which of the following expressions represents a legal way of checking whether a value assigned to the num variable is either less than 100 or more than 200?
type	mc
from	testbank-py-1-ch03-79
section	3.7 Boolean Variables and Operators
id	testbank-py-2-ch03-79

103. Which of the following conditions is true only when the integer variable middle is between 0 and 10 inclusive?

A. `middle >= 0 and middle <= 10`
B. `0 < middle < 10`
C. `0 <= middle or middle <= 10`
D. `middle > 0 and middle < 10`

Section	3.7 Boolean Variables and Operators
Title	Which of the following conditions is true only when the integer variable middle is between 0 and 10?
type	mc
from	testbank-py-1-ch03-82
section	3.7 Boolean Variables and Operators
id	testbank-py-2-ch03-82

104. What string method can be used to determine if the string contained in the variable `text` only consists of numbers?

A. `text.isalnum()`
B. `text.isalpha()`
C. `text.isdigit()`
D. `text.islower()`

Section	3.8 Analyzing Strings
Title	What String method checks for all numbers in a variable?
type	mc
section	3.8 Analyzing Strings
id	testbank-py-1-ch03-100

105. What will be printed by the following code snippet?

```
name = "Ravi Avalon"
counter = name.count("av")
print(counter)
```

A. `0`
B. `1`
C. `2`
D. `-1`

Section	3.8 Analyzing Strings
Title	What value is returned when using the String method count?
type	mc
section	3.8 Analyzing Strings
id	testbank-py-1-ch03-101

106. What will be printed by the following code snippet?

```
name = "Dino the Dinosaur"
counter = name.count("Di")
print(counter)
```

A. `0`
B. `1`
C. `2`
D. `-1`

Section	3.8 Analyzing Strings
Title	What value is returned when using the String method count?
type	mc
section	3.8 Analyzing Strings
id	testbank-py-1-ch03-102

107. Which of the following statements returns the number of blank spaces contained in the string `sentence`?

A. `sentence.count(" ")`
B. `" " in sentence`
C. `sentence.find(" ")`
D. `count(sentence)`

Section	3.8 Analyzing Strings
Title	What method is used to identify the number of spaces in a string variable?
type	mc
section	3.8 Analyzing Strings
id	testbank-py-1-ch03-103

108. Review the code snippet below:

```
name1 = "Betty joe"
name2 = "Betty Jean"
name3 = "Betty Jane"
if name1 < name2 :
   if name1 < name3 :
       print(name1, "is first")
   else :
       print(name3, "is first")
else :
   if name2 < name3 :
      print(name2, "is first")
   else :
      print(name3, "is first")
```

what output is produced?

A. `Betty joe is first`
B. `Betty Jean is first`
C. `Betty Jane is first`
D. `Betty joe is firstBetty Jean is firstBetty Jane is first`

Section	3.8 Analyzing Strings
Title	Review the code snippet below; what output is produced?
type	mc
section	3.8 Analyzing Strings
id	testbank-py-1-ch03-105

109. How do you test if a filename (given as a string) has an extension of ".png", ".jpg" or ".gif"?

A. `if filename.endswith(".png" or ".jpg" or ".gif") :`
B. `if filename.endswith(".png") or filename.endswith(".jpg") or filename.endswith(".gif")`

:

C. `if ".png" in filename or ".jpg" in filename or ".gif" in filename :`

D. `if filename.contains(".jpg", ".gif", ".png") :`

Section	3.8 Analyzing Strings
Title	How do you test if a filename (given as a string) has a valid extension?
type	mc
section	3.8 Analyzing Strings
id	testbank-py-1-ch03-106

110. What value is displayed by the following code segment?

```
s = "Computer Science"
x = s.find("TER")
print(x)
```

A. -1

B. 0

C. 5

D. 6

Section	3.8 Analyzing Strings
Title	Search for a substring within a string
type	mc
section	3.8 Analyzing Strings
id	testbank-py-1-ch03-107

111. What value is displayed by the following code segment?

```
name = "John Smith"
print(name.startswith("john"))
```

A. `-1`

B. `0`

C. `False`

D. `True`

Section	3.8 Analyzing Strings
Title	Determine what is output by the starts with method
type	mc
section	3.8 Analyzing Strings
id	testbank-py-1-ch03-108

112. Which of the following checks to see if the string variable `sentence` starts with the string `"Dear"`?

A. `if "Dear" in sentence :`

B. `if sentence.find("Dear") :`

C. `if "Dear" not in sentence :`

D. `if sentence.startswith("Dear") :`

Section	3.8 Analyzing Strings
Title	Which statement tests if a string contains a substring at the beginning?
type	mc
section	3.8 Analyzing Strings
id	testbank-py-1-ch03-95

113. What value is printed by the following code snippet?

```
name = "John R. Johnson"
```

```
firstName = "John"
location = name.find(firstName)
print(location)
```

A. `-1`
B. `0`
C. `8`
D. `1`

Section	3.8 Analyzing Strings
Title	What value is returned when using the find substring command?
type	mc
section	3.8 Analyzing Strings
id	testbank-py-1-ch03-96

114. What value is printed by the following code snippet?

```
name = "John R. Johnson"
firstName = "Joe"
location = name.find(firstName)
print(location)
```

A. `-1`
B. `0`
C. `8`
D. `1`

Section	3.8 Analyzing Strings
Title	What value is returned when using the find substring command?
type	mc
section	3.8 Analyzing Strings
id	testbank-py-1-ch03-97

115. What string method can be used to determine if the string contained in the variable `text` only consists of letters?

A. `text.isalnum()`
B. `text.isalpha()`
C. `text.isdigit()`
D. `text.islower()`

Section	3.8 Analyzing Strings
Title	What String method checks for all characters in a variable?
type	mc
section	3.8 Analyzing Strings
id	testbank-py-1-ch03-98

116. What string method can be used to determine if all characters within a string are lowercase?

A. `text.isalnum()`
B. `text.isalpha()`
C. `text.isdigit()`
D. `text.islower()`

Section	3.8 Analyzing Strings
Title	What String method checks for all lowercase characters?
type	mc
section	3.8 Analyzing Strings
id	testbank-py-1-ch03-99

117. Review the code snippet below:

```
sentence = input("Enter some text: ")
firstCh = sentence[0]
```

Which of the following statements correctly determines if the first letter of the string contained in `sentence` is an uppercase letter?

A. `if firstCh.isupper() :`
B. `if not (firstCh.isupper()) :`
C. `if firstCh.isspace() :`
D. `if not (firstCh.isspace()) :`

Section	3.8 Analyzing Strings
Title	Which of the following statements correctly determines if the first letter of the string is an uppercase letter?
type	mc
from	testbank-py-1-ch03-104
section	3.8 Analyzing Strings
id	testbank-py-2-ch03-104

118. What value is displayed when the following code segment is executed?

```
s = "Jonathan"
print(s.endswith("n"))
```

A. `-1`
B. `0`
C. `False`
D. `True`

Section	3.8 Analyzing Strings
Title	Trace code involving the endswith method
type	mc
section	3.8 Analyzing Strings
id	testbank-py-2-ch03-123

119. Which of the following checks to see if there is a comma anywhere in the string variable `name`?

A. `if "," in name :`
B. `if name.contains(",") :`
C. `if "," not in name :`
D. `if name.startswith(",") :`

Section	3.8 Analyzing Strings
Title	Which statement tests if a string contains a substring?
type	mc
from	testbank-py-1-ch03-94
section	3.8 Analyzing Strings
id	testbank-py-2-ch03-94

120. Which of the following statements can be used to validate whether the value a user entered for a grade is in the range 0 to 100, including both 0 and 100?

A. `if grade > 0 and grade < 100 :`
B. `if grade >= 0 and grade <= 100 :`
C. `if grade <= 0 and grade >= 100 :`
D. `if grade <=0 or grade >=100 :`

Section	3.9 Application: Input Validation
Title	Which statement validates the user input is between 0 and 100?
type	mc

section	3.9 Application: Input Validation
id	testbank-py-1-ch03-109

121. Which of the following statements is the best choice to validate user input when entering a marital status as a single letter?

A.
```
if maritalStatus == "s" or maritalStatus == "m" :
```

B.
```
if maritalStatus == "S" or maritalStatus == "M" :
```

C.
```
if (maritalStatus == "s" or maritalStatus == "m" or
    maritalStatus == "S" or maritalStatus == "M") :
```

D.
```
if maritalStatus == "s" or "S" or "m" or "M" :
```

Section	3.9 Application: Input Validation
Title	Which statements can be used to validate the user entered a valid marital status?
type	mc
from	testbank-py-1-ch03-110
section	3.9 Application: Input Validation
id	testbank-py-2-ch03-110

122. Review the code snippet below:

```
maritalStatus = input("Enter your marital status (s for single, m for married): ")
maritalStatus = maritalStatus.upper()
```

Which of the following statements can be used to validate whether the user entered a valid marital status?

A.
```
if maritalStatus == "S" or maritalStatus == "M" :
```

B.
```
if maritalStatus == "s" or maritalStatus == "m" :
```

C.
```
if (maritalStatus == "s" or maritalStatus == "m") and
   (maritalStatus == "S" or maritalStatus == "M") :
```

D.
```
if maritalStatus == "s" or "S" or "m" or "M" :
```

Section	3.9 Application: Input Validation
Title	Which statements can be used to validate the user entered a valid marital status?
type	mc
from	testbank-py-1-ch03-111
section	3.9 Application: Input Validation
id	testbank-py-2-ch03-111

123. Review the code snippet below:

```
month = int(input("Enter your two digit birth month: "))
```

Which of the following statements checks that the user entered a valid month?

A. `if month >= 1 or month <= 12 :`

B. `if month >= 1 and month <= 12`

C. `if month > 1 or month < 12 :`
D. `if month > 1 and month < 12 :`

Section	3.9 Application: Input Validation
Title	Which statements can be used to validate the user entered a valid birth month?
type	mc
from	testbank-py-1-ch03-112
section	3.9 Application: Input Validation
id	testbank-py-2-ch03-112

124. Which statement will successfully import the pyplot submodule?

A. `from math import pyplot`
B. `from matplotlib import pyplot`
C. `import pyplot`
D. `import * from pyplot`

Section	3.9 Application: Input Validation
Title	Which statement will successfully import the pyplot submodule?
type	mc
section	3.9 Application: Input Validation
id	testbank-py-2-ch03-124

125. Which statement adds a bar to a pyplot graph after pyplot has been imported by the following statement?

```
from matplotlib import pyplot
```

A. `bar(4, 44.5)`
B. `pyplot.bar(4, 44.5)`
C. `pyplot(4, 44.5)`
D. `bar.pyplot(4, 44.5)`

Section	3.9 Application: Input Validation
Title	Which statement adds a bar to a pyplot graph?
type	mc
section	3.9 Application: Input Validation
id	testbank-py-2-ch03-125