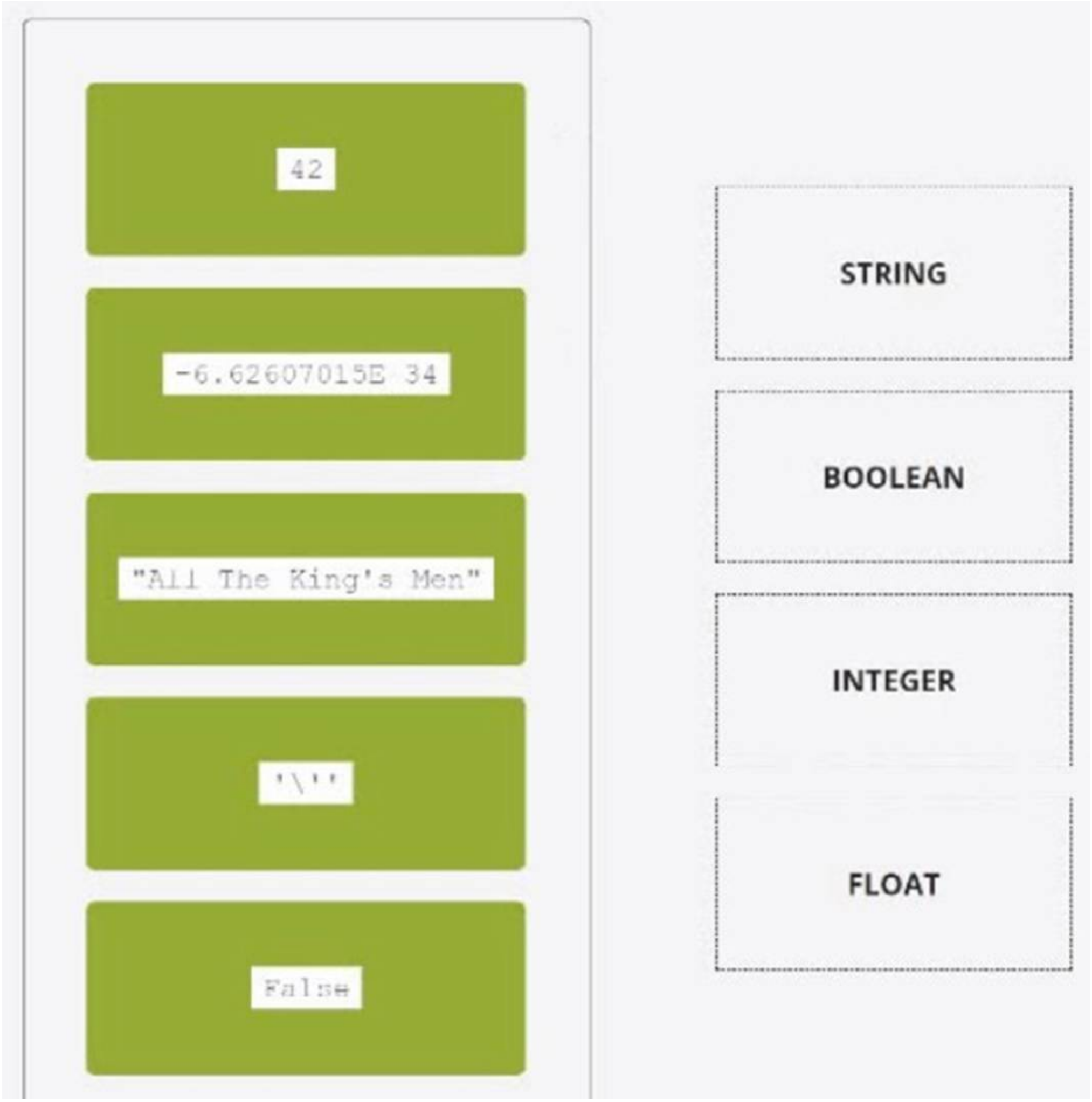
Python-Institute

Exam Questions PCEP-30-02

PCEP - Certified Entry-Level Python Programmer

NEW QUESTION 1
DRAG DROP
Drag and drop the literals to match their data type names.



A. Mastered
B. Not Mastered

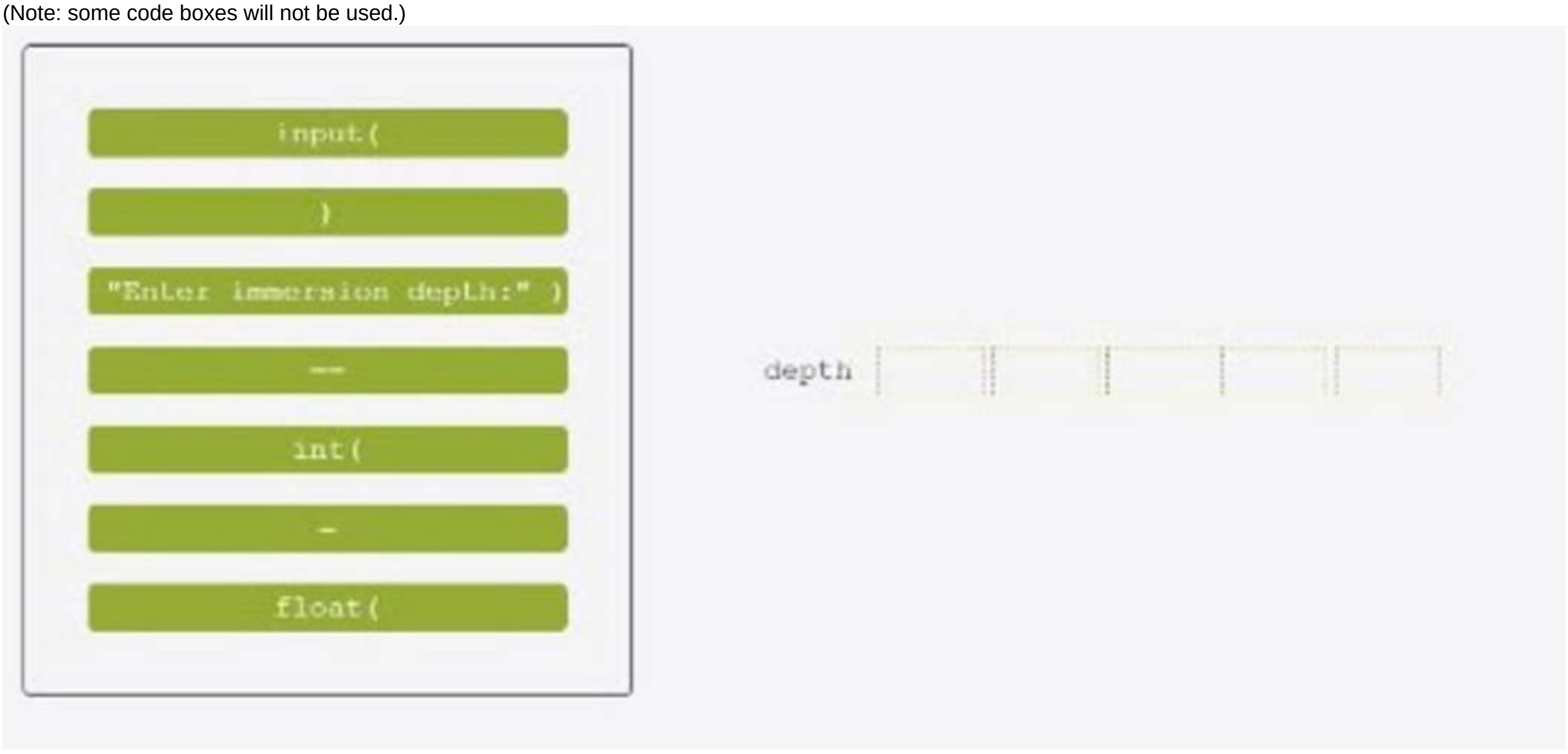
Answer: A

Explanation:

One possible way to drag and drop the literals to match their data type names is:
? STRING: ??All The King??s Men??
? BOOLEAN: False
? INTEGER: 42
? FLOAT: -6.62607015E-34
A literal is a value that is written exactly as it is meant to be interpreted by the Python interpreter. A data type is a category of values that share some common characteristics or operations. Python has four basic data types: string, boolean, integer, and float.
A string is a sequence of characters enclosed by either single or double quotes. A string can represent text, symbols, or any other information that can be displayed as text. For example, ??All The King??s Men?? is a string literal that represents the title of a novel.
A boolean is a logical value that can be either True or False. A boolean can represent the result of a comparison, a condition, or a logical operation. For example,

False is a boolean literal that represents the opposite of True.
An integer is a whole number that can be positive, negative, or zero. An integer can represent a count, an index, or any other quantity that does not require fractions or decimals. For example, 42 is an integer literal that represents the answer to life, the universe, and everything.
A float is a number that can have a fractional part after the decimal point. A float can represent a measurement, a ratio, or any other quantity that requires precision or
approximation. For example, -6.62607015E-34 is a float literal that represents the Planck constant in scientific notation.
You can find more information about the literals and data types in Python in the following references:
? [Python Data Types]
? [Python Literals]
? [Python Basic Syntax]

NEW QUESTION 2
DRAG DROP
Insert the code boxes in the correct positions in order to build a line of code which asks the user for an integer value and assigns it to the depth variable.
(Note: some code boxes will not be used.)



A. Mastered
B. Not Mastered

Answer: A

Explanation:

One possible way to insert the code boxes in the correct positions in order to build a line of code which asks the user for an integer value and assigns it to the depth variable is:
depth = int(input("Enter the immersion depth: "))
This line of code uses the input function to prompt the user for a string value, and then uses the int function to convert that string value into an integer number. The result is then assigned to the variable depth.
You can find more information about the input and int functions in Python in the following references:
? [Python input() Function]
? [Python int() Function]

NEW QUESTION 3
What happens when the user runs the following code?

```
speed = 0
while speed < 30:
    speed *= 2
    if speed > 10:
        continue
    print("*", end="")
else:
    print("*")
```

A. The program outputs three asterisks (***)to the screen.
B. The program outputs one asterisk (*) to the screen.
C. The program outputs five asterisks (*****) to the screen.
D. The program enters an infinite loop.

Answer: D

Explanation:
The code snippet that you have sent is a while loop with an if statement and a print statement inside it. The code is as follows:
while True: if counter < 0: print(????) else: print(??**??)
The code starts with entering a while loop that repeats indefinitely, because the condition ??True?? is always true. Inside the loop, the code checks if the value of ??counter?? is less than 1. If yes, it prints a single asterisk () to the screen. If no, it prints three asterisks (**) to the screen. However, the code does not change the value of ??counter?? inside the loop, so the same condition is checked over and over again. The loop never ends, and the code enters an infinite loop.
The program outputs either one asterisk () or three asterisks (**) to the screen repeatedly, depending on the initial value of ??counter??. Therefore, the correct answer is D. The program enters an infinite loop.
Reference: [Python Institute - Entry-Level Python Programmer Certification]

NEW QUESTION 4
What is true about exceptions and debugging? (Select two answers.)

A. A tool that allows you to precisely trace program execution is called a debugger.
B. If some Python code is executed without errors, this proves that there are no errors in it.
C. One try-except block may contain more than one except branch.
D. The default (anonymous) except branch cannot be the last branch in the try-except block.

Answer: AC

Explanation:
Exceptions and debugging are two important concepts in Python programming that are related to handling and preventing errors. Exceptions are errors that occur when the code cannot be executed properly, such as syntax errors, type errors, index errors, etc. Debugging is the process of finding and fixing errors in the code, using various tools and techniques. Some of the facts about exceptions and debugging are:
? A tool that allows you to precisely trace program execution is called a debugger. A debugger is a program that can run another program step by step, inspect the values of variables, set breakpoints, evaluate expressions, etc. A debugger can help you find the source and cause of an error, and test possible solutions. Python has a built-in debugger module called pdb, which can be used from the command line or within the code. There are also other third-party debuggers available for Python, such as PyCharm, Visual Studio Code, etc12
? If some Python code is executed without errors, this does not prove that there are no errors in it. It only means that the code did not encounter any exceptions that would stop the execution. However, the code may still have logical errors, which are errors that cause the code to produce incorrect or unexpected results. For example, if you write a function that is supposed to calculate the area of a circle, but you use the wrong formula, the code may run without errors, but it will give you the wrong answer. Logical errors are harder to detect and debug than syntax or runtime errors, because they do not generate any error messages. You have to test the code with different inputs and outputs, and compare them with the expected results34
? One try-except block may contain more than one except branch. A try-except block is a way of handling exceptions in Python, by using the keywords try and

except. The try block contains the code that may raise an exception, and the except block contains the code that will execute if an exception occurs. You can have multiple except blocks for different types of exceptions, or for different actions to take. For example, you can write a try-except block like this:
try: # some code that may raise an exception except ValueError: # handle the ValueError exception except ZeroDivisionError: # handle the ZeroDivisionError exception except: # handle any other exception
This way, you can customize the error handling for different situations, and provide more informative messages or alternative solutions5
? The default (anonymous) except branch can be the last branch in the try-except block. The default except branch is the one that does not specify any exception type, and it will catch any exception that is not handled by the previous except branches. The default except branch can be the last branch in the try-except block, but it cannot be the first or the only branch. For example, you can write a try- except block like this:
try: # some code that may raise an exception except ValueError: # handle the ValueError exception except: # handle any other exception
This is a valid try-except block, and the default except branch will be the last branch. However, you cannot write a try-except block like this:
try: # some code that may raise an exception except: # handle any exception
This is an invalid try-except block, because the default except branch is the only branch, and it will catch all exceptions, even those that are not errors, such as KeyboardInterrupt or SystemExit. This is considered a bad practice, because it may hide or ignore important exceptions that should be handled differently or propagated further. Therefore, you should always specify the exception types that you want to handle, and use the default except branch only as a last resort5
Therefore, the correct answers are A. A tool that allows you to precisely trace program execution is called a debugger. and C. One try-except block may contain more than one except branch.
Reference: Python Debugger – Python pdb - GeeksforGeeksHow can I see the details of an exception in Python??s debugger?Python Debugging (fixing problems)Python - start interactive debugger when exception would be otherwise thrownPython Try Except [Error Handling and Debugging — Programming with Python for Engineers]

NEW QUESTION 5
How many hashes (+) does the code output to the screen?

```
floor = 10
while floor != 0:
    floor //= 1
    print("+", end="")
else:
    print("+")
```

A. one
B. zero (the code outputs nothing)
C. five
D. three

Answer: C

Explanation:
The code snippet that you have sent is a loop that checks if a variable ??floor?? is less than or equal to 0 and prints a string accordingly. The code is as follows: floor = 5 while floor > 0: print(??+??) floor = floor - 1
The code starts with assigning the value 5 to the variable ??floor??. Then, it enters a while loop that repeats as long as the condition ??floor > 0?? is true. Inside the loop, the code prints a ??+?? symbol to the screen, and then subtracts 1 from the value of ??floor??. The loop ends when ??floor?? becomes 0 or negative, and the code exits.
The code outputs five ??+?? symbols to the screen, one for each iteration of the loop. Therefore, the correct answer is C. five.
Reference: [Python Institute - Entry-Level Python Programmer Certification]

NEW QUESTION 6
What is the expected output of the following code?

```
counter = 84 // 2
if counter < 0:
    print("*")
elif counter >= 42:
    print("**")
else:
    print("***")
```

A. The code produces no output.
B. * * *
C. * *
D. *

Answer: C

Explanation:
The code snippet that you have sent is a conditional statement that checks if a variable ??counter?? is less than 0, greater than or equal to 42, or neither. The code is as follows: if counter < 0: print(????) elif counter >= 42: print(????) else: print(????)
The code starts with checking if the value of ??counter?? is less than 0. If yes, it prints a single asterisk () to the screen and exits the statement. If no, it checks if the value of ??counter?? is greater than or equal to 42. If yes, it prints three asterisks () to the screen and exits the statement. If no, it prints two asterisks () to the screen and exits the statement.
The expected output of the code depends on the value of ??counter??. If the value of ??counter?? is 10, as shown in the image, the code will print two asterisks (**) to the screen, because 10 is neither less than 0 nor greater than or equal to 42. Therefore, the correct answer is C.
* *
Reference: [Python Institute - Entry-Level Python Programmer Certification]

NEW QUESTION 7
What is the expected output of the following code?

```
def runner(brand, model="", year=2021, convertible=False):
    return (brand, str(year), str(convertible))


print(runner("Fermi")[2][2])
```

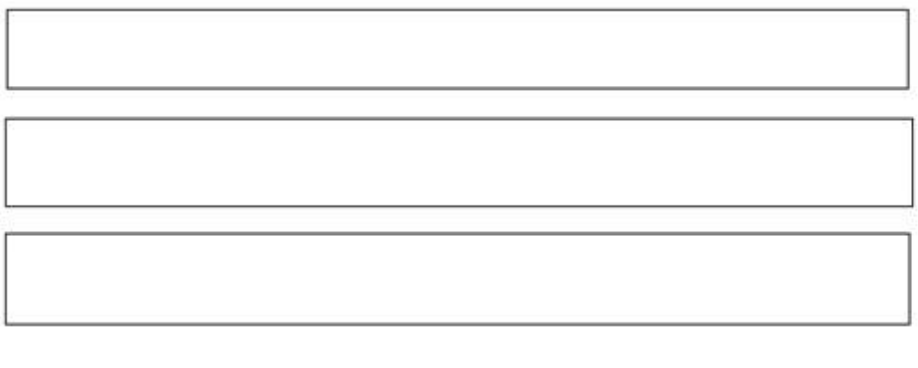
A. 1
B. The code raises an unhandled exception.
C. False
D. ('Fermi ', '2021', 'False')

Answer: D

Explanation:
The code snippet that you have sent is defining and calling a function in Python. The code is as follows:
def runner(brand, model, year): return (brand, model, year) print(runner(??Fermi??))

The code starts with defining a function called ??runner?? with three parameters: ??brand??, ??model??, and ??year??. The function returns a tuple with the values of the parameters. A tuple is a data type in Python that can store multiple values in an ordered and immutable way. A tuple is created by using parentheses and separating the values with commas. For example, (1, 2, 3) is a tuple with three values. Then, the code calls the function ??runner?? with the value ??Fermi?? for the ??brand?? parameter and prints the result. However, the function expects three arguments, but only one is given. This will cause a TypeError exception, which is an error that occurs when a function or operation receives an argument that has the wrong type or number. The code does not handle the exception, and therefore it will terminate with an error message.
However, if the code had handled the exception, or if the function had used default values for the missing parameters, the expected output of the code would be ('Fermi ', ??2021??, ??False??). This is because the function returns a tuple with the values of the parameters, and the print function displays the tuple to the screen. Therefore, the correct answer is D. ('Fermi ', ??2021??, ??False??).
Reference: Python Functions - W3SchoolsPython Tuples - W3SchoolsPython Exceptions:
An Introduction – Real Python

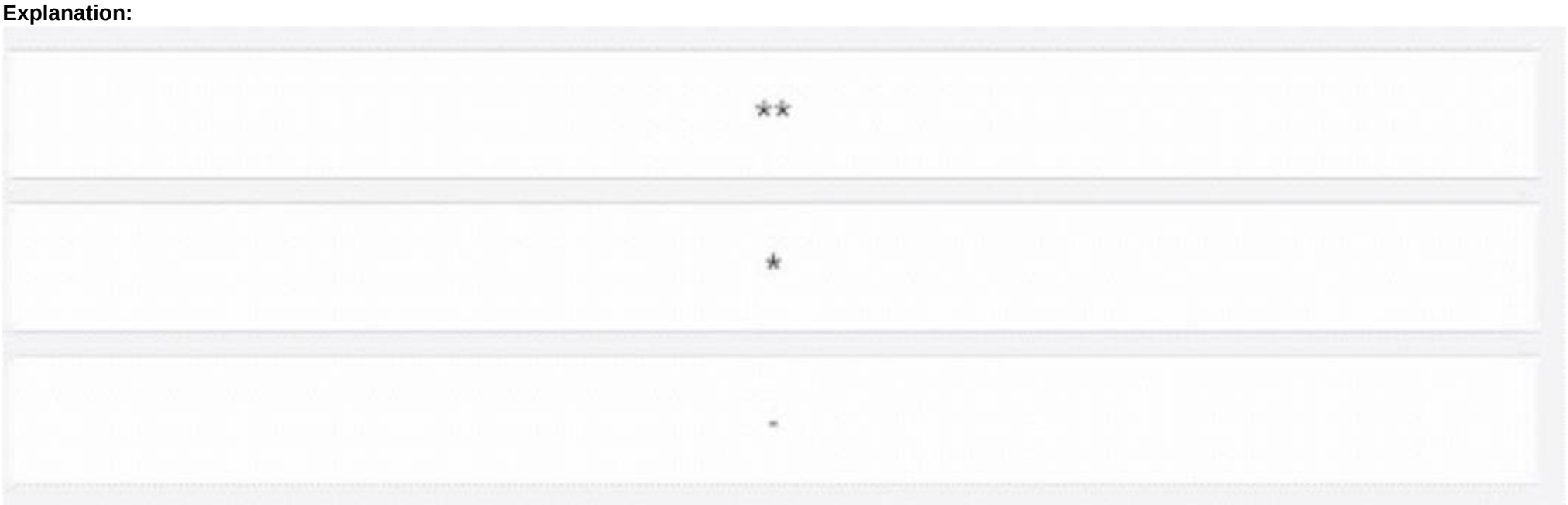
NEW QUESTION 8
DRAG DROP
Arrange the binary numeric operators in the order which reflects their priorities, where the top-most position has the highest priority and the bottom-most position has the lowest priority.



A. Mastered
B. Not Mastered

Answer: A

Explanation:



The correct order of the binary numeric operators in Python according to their priorities is:
? Exponentiation (**)
? Multiplication (*) and Division (/, //, %)
? Addition (+) and Subtraction (-)
This order follows the standard mathematical convention of operator precedence, which can be remembered by the acronym PEMDAS (Parentheses, Exponents, Multiplication/Division, Addition/Subtraction). Operators with higher precedence are
evaluated before those with lower precedence, but operators with the same precedence are evaluated from left to right. Parentheses can be used to change the order of evaluation by grouping expressions.
For example, in the expression 2 + 3 * 4 ** 2, the exponentiation operator (**) has the highest priority, so it is evaluated first, resulting in 2 + 3 * 16. Then, the multiplication operator (*) has the next highest priority, so it is evaluated next, resulting in 2 + 48. Finally, the addition operator (+) has the lowest priority, so it is evaluated last, resulting in 50.
You can find more information about the operator precedence in Python in the following references:
? 6. Expressions — Python 3.11.5 documentation
? Precedence and Associativity of Operators in Python - Programiz
? Python Operator Priority or Precedence Examples Tutorial

NEW QUESTION 10
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