

Computer Science 1	Exercises 14.04-05	Date:
Name:		Period:

1. When working with strings, what is the difference between functions **find** and **rfind**?

2. Why is using **find** and **rfind** preferable to using **index** and **rindex**?

3. What is the output of this program?

```
s1 = "HOW MANY BANANAS ARE ON ANA'S BANANA BOAT"
print(s1.count("NA"))
s2 = s1[9:36]
print(s2.startswith("BANANA"))
print(s2.endswith("BANANA"))
```

4. Look at program **StringCommands08.py**, specifically at lines 10 and 11.
Do these lines of code alter the value of the original string **s1**?

5. Look at program **StringCommands09.py**, specifically at lines 7 and 10.
Do these lines of code alter the value of the original string **s1**?

6. If your string has a mixture of CAPITAL letters, lowercase letters, digits, and symbols, the **upper** function will only affect the _____ in the string. In a similar manner, the **lower** function will only affect the _____ in the string.

7. Look at program **StringCommands10.py** and its output.
Explain how this program fixes the issue from program **StringOperators07.py**.
(This is the program that displayed “**apple goes alphabetically before ZEBRA**”.)

8. Refer to the previous question.
Would it have worked if the **lower** function were used instead?

9. What command will convert integers, real numbers and Boolean values to strings?

10. What command will convert strings to integers?

11. What command will convert strings to real numbers?

12. What is the output of this program statement?

```
print(ord('C'), chr(68))
```

13. What is the constant mathematical difference between the ASCII value of a lowercase letter and its corresponding CAPITAL letter?

14. Look at program **StringCommands16.py**. The **allCAPS** function in this program is supposed to return a copy of the string where all of the lowercase letters are converted to CAPITAL letters; however, it does not work properly. Explain why.

15. Look at program **StringCommands17.py**. Explain what was added to the **allCAPS** function in this program to fix the problem of the previous program.

In questions 16 through 26, match the condition to its “is” command.

Your Answer		“is” Command	Condition for the “is” Command to Return True	
16.		isalnum	A	entire string contains letters
17.		isalpha	B	all letters in the string are lowercase
18.		isdecimal	C	all letters in the string are UPPERCASE
19.		isdigit	D	entire string contains 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
20.		isidentifier	E	entire string contains 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, ¹ , ² , ³
21.		islower	F	entire string contains 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, ¹ , ² , ³ , ¹ / ₄ , ¹ / ₂ , ³ / ₄
22.		isnumeric	G	entire string contains letters or 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
23.		isprintable	H	entire string contains letters or 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 or _ and starts with a letter
24.		isspace	I	entire string contains invisible characters like space, tab or new line
25.		istitle	J	The entire string contains any of the characters that you can type. Also could be an empty string.
26.		isupper	K	The first letter of every word in the string is capitalized. The rest are lowercase.

27. The **split** command essentially breaks a _____ into an array of _____.

28. What command is the opposite of the **split** command?

29. Look at program **StringErrors01.py**. Explain the error in this program.
30. Look at program **StringErrors02.py**. Explain the error in this program.
31. Look again at program **StringErrors02.py**. Would this program work if the **int** were changed to **float**?
32. Look at program **StringErrors03.py**. Explain the error in this program.
33. Look at program **StringErrors04.py**. This program is supposed to capitalize string **s** and then replace every occurrence of 'A' with 'U'. Explain the logic error in this program.
34. When performing string slicing, do you get an error if either of the numbers is too large?