



Programming in Python

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Tutorial on functions

Problem 1: Write a Python code using functions which calculates the number of upper case letters, lower case letters, total number of characters and number of words

Test Cases		
Sr. No.	Input	Expected output
1	Functions could have no parameters	1 29 34 5
2	FUNCTIONS COULD HAVE NO RETURN VALUE	31 0 36 6
3	Functions Could Have Multiple Return Statements, But The Moment The First Return Is Executed, Control Exits From The Function	19 86 125 19
4	FUNCTIONS have to be Defined before THEY can be called. the function Call Cannot come before the DEFINITION	26 63 107 18
5	function CALLS COULD BE USED IN EXPRESSIONS	36 1 43 7

Problem 2: Write a Python code using functions to calculate area and perimeter of circle and rectangle

Test Cases					
Sr. No.	Input	Expected output	Sr. No.	Input	Expected output
1	“circle” “area” 7	154 sq. units	2	“circle” “perimeter” 7	44 units
3	“rectangle” “area” 15 10	150 sq. units	4	“rectangle” “perimeter” 15 10	50 units
5	“exit”	<i>Stop execution</i>			

Problem 3: Write a Python code using functions which checks whether the input coordinates form a triangle or not

Test Cases		
Sr. No.	Input	Expected output
1	(0, 0), (0, 1), (1, 0)	Triangle
2	(-3, -5), (-7, 10), (0, 0)	Triangle
3	(1, 2), (1, 10), (5, 2)	Triangle
4	(1, 1), (2, 2), (3, 3)	Not a triangle
5	(2, 3), (3, 2), (2, 3)	Not a triangle
6	(0, 0), (10, 0), (0, 0.0001)	Triangle