Write a program to evaluate the quadratic equation below. Using a loop, evaluate it for x values from -10 through +10. Display the results as ordered pairs in the format (x, y). The program should make use of a Python function called ‘evaluate’ which accepts the value for x and returns the value for y.

y =

Option 1: Calculate and display the coordinates of the roots of the equation.

Option 2: Calculate and display the minimum coordinate of the equation

Grading

*Well-constructed and commented code* that properly calculates and displays the ordered pairs in the domain specified will receive a ‘C’. To receive a ‘B’ it must also properly mark the roots. ‘A’ level projects will display the maximum/minimum value co-ordinates based on the results returned from the function. Points will be deducted for improper formatting, commenting, naming and whitespace issues.

Bonus: Make the program work with any quadratic equation by allowing the user to input a, b, and c (the coefficients of the quadratic equation in standard form.)

Sample Output:

(-10,72)

(-9,55)

(-8,40)

(-7,27)

(-6,16)

(-5,7)

(-4,0) - Root

(-3,-5)

(-2,-8)

(-1,-9)

(0,-8)

(1,-5)

(2,0) - Root

(3,7)

(4,16)

(5,27)

(6,40)

(7,55)

(8,72)

(9,91)

(10,112)

Minimum coordinate is (-1,-9)