

## Computer Science

## Activity – quad\_functions

Take the following lines of Python3 code, select the ones that you want to use for your program, and place them in the correct order. The final result will be a program that solves for the roots of a quadratic equation using the quadratic formula.

This Parsons problem was inspired by Denny, Luxton-Reilly, and Simon's research *Evaluating a New Exam Question: Parsons Problems*, available at [http://www.academia.edu/2141084/Evaluating\\_a\\_new\\_exam\\_question\\_Parsons\\_problems](http://www.academia.edu/2141084/Evaluating_a_new_exam_question_Parsons_problems)

```
"""
quad_functions.py
This program solves quadratic equations using three functions:
* one function to get the coefficients a, b, and c
* one function to calculate the two roots, and
* one function to print out the results
@author You
@version 1.0
"""

def get_coeffs():

def get_coeffs(a, b, c):

def calculate_roots(a,b,c):

def main():

def calculate_roots():

def display_solutions(root1, root2):

def display_solutions():

main()

a, b, c = get_coeffs()

root1 = (-b + (b * b - 4 * a * c) ** (1/2)) / (2 * a)
```

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```

root2 = (-b - (b * b - 4 * a * c) ** (1/2)) / (2 * a)
x, y, z = get_coeffs(a, b, c)
display_solutions(r1, r2)
return root1, root2
display_solutions()
display_solutions(a, b, c)
print(root1, root2)
return a, b, c
print("The solutions are: ")
a = eval(input("Enter coefficient a: "))
b = eval(input("Enter coefficient b: "))
c = eval(input("Enter coefficient c: "))
r1, r2 = calculate_roots()
a, b, c = get_coeffs()
r1, r2 = calculate_roots(a, b, c)
if __name__ == "__main__":
#!/usr/bin/env python3

```