

ICS3U-4C-4U

A:

Create a program that asks the user for three numbers that are called a, b, and c. These numbers are found in the following quadratic equation.

$$ax^2 + bx + c = 0$$

Ask the user for an a, b and c value.

Substitute the numbers into the formulae and then round off the answer to 3 decimal places.

$$x_1 = \frac{-b + \sqrt{b^2 - 4ac}}{2a} \quad \text{and} \quad x_2 = \frac{-b - \sqrt{b^2 - 4ac}}{2a}$$

Ex. The quadratic function is $3x^2 - 5x + 1 = 0$

input: what is your a value? 3

what is your b value? -5

what is your c value? 1

output: the solutions are $x_1 = 1.434$ and $x_2 = 0.232$

B:

Create a program that asks the user for the volume of a cylinder and its height and the program returns the radius of the cylinder. Round off the answer to 2 decimal places.

$$r = \sqrt{\frac{V}{\pi h}}$$

Ex. The Volume of the cylinder is 100cm^3 and the height is 25cm

input: what is the volume in cm^3 ? 100

what is the height in cm? 25

output: the radius of the cylinder is : 1.13