Solve the examples used in the [Version]: 4.3 with the [new version: 5.0]

1.) If the delta discriminant is [positive] (delta > 0).

```
====================================================================
|           **[ SOLVE THE QUADRATIC OR FIRSTLEVEL EQUATIONS ]**           |
|   ------------------------------------------------------------------------------   |
|     **[ USING THE RUNALGQUADRATIC_FIRSTLEVEL_EQUATIONS.PY PROGRAM ]**     |
|   ------------------------------------------------------------------------------   |
|                  . . . [ New Version: 5.0 (Stable) ] . . .                  |
====================================================================
```

[Enter [news] Coefficients of the Quadratic Equation]

  - The 1º [coefficients(a)]:
 -_- Type the [new] value? -3

  - The 2º [coefficients(b)]:
 -_- Type the [new] value? 12

  - The 3º [coefficients(c)]:
 -_- Type the [new] value? 27

--[[reals] Coefficients typed, Ok!]--

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| . . . *[ EQUATION PROCESSING ]* . . . |
==============================
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-- The [new] value of [delta] finded is 468.00
-- The value of [raisedelta] calculed is 21.63

[Solution]

-- The first [real root] is -1.61
-- The second [real root] is 5.61

--[Algorithm: [RunAlgQuadratic_FirstLevel_Equation.py] ended Ok!]--

   . . .Key [ENTER] to exit, Ok!. . .

2.) If the delta discriminant is [zero] (delta = 0).

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====================================================================
|           **[ SOLVE THE QUADRATIC OR FIRSTLEVEL EQUATIONS ]**           |
|   ------------------------------------------------------------------------------   |
|     **[ USING THE RUNALGQUADRATIC_FIRSTLEVEL_EQUATIONS.PY PROGRAM ]**     |
|   ------------------------------------------------------------------------------   |
|                  . . . [ New Version: 5.0 (Stable) ] . . .                  |
====================================================================
```

[Enter [news] Coefficients of the Quadratic Equation]

  - The 1º [coefficients(a)]:
-_- Type the [new] value? -1

  - The 2º [coefficients(b)]:
-_- Type the [new] value? 4

  - The 3º [coefficients(c)]:
-_- Type the [new] value? -4

--[[reals] Coefficients typed, Ok!]--


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| . . . *[ EQUATION PROCESSING ]* . . . |
=============================
```

-- The [new] value of [delta] finded is 0.00
-- The value of [raisedelta] calculed is 0.00

[Solution]

-- The [real root] determined is 2.00

--[Algorithm: [RunAlgQuadratic_FirstLevel_Equation.py] ended Ok!]--

    . . .Key [ENTER] to exit, Ok!. . .

3.) If the delta discriminant is [negative] (delta < 0).


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======================================================================
|           **[ SOLVE THE QUADRATIC OR FIRSTLEVEL EQUATIONS ]**           |
| ------------------------------------------------------------------------------------------------- |
|    **[ USING THE RUNALGQUADRATIC_FIRSTLEVEL_EQUATIONS.PY PROGRAM ]**    |
| ------------------------------------------------------------------------------------------------- |
|                    . . . [ New Version: 5.0 (Stable) ] . . .                    |
======================================================================
```

[Enter [news] Coefficients of the Quadratic Equation]

  - The 1º [coefficients(a)]:
-_- Type the [new] value? 3

  - The 2º [coefficients(b)]:
-_- Type the [new] value? 5

  - The 3º [coefficients(c)]:
-_- Type the [new] value? 6

--[[reals] Coefficients typed, Ok!]--


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| . . . *[ EQUATION PROCESSING ]* . . . |
==============================
```

-- The [new] value of [delta] finded is -47.00
-- The value of [raisedelta] calculed is 0.00+6.86j

[WARNING!]
**
**[IF THE VALUE OF [DELTA] IS [NEGATIVE] THEN NO EXIST [REALS(|R) ROOTS]: ROOT1
    AND ROOT2]]**
[WITH THE COEFICIENTS TYPED OF THIS EQUATION!]
[AND WILL FIND THE COMPLEXS(C) ROOTS : ROOT1 E ROOT2 OF THIS EQUATION OK!]

[Solution]

-- The first [complex root] is -0.83+1.14j
-- The second [complex root] is -0.83-1.14j

--[Algorithm: [RunAlgQuadratic_FirstLevel_Equation.py] ended Ok!]--

. . .Key [ENTER] to exit, Ok!. . .

4.) Incomplete quadratic equation.


```
=========================================================================
|                  **[ SOLVE THE QUADRATIC OR FIRSTLEVEL EQUATIONS ]**               |
|    --------------------------------------------------------------------------------------------   |
|      **[ USING THE RUNALGQUADRATIC_FIRSTLEVEL_EQUATIONS.PY PROGRAM ]**    |
|    --------------------------------------------------------------------------------------------   |
|                          . . . [ New Version: 5.0 (Stable) ] . . .                     |
=========================================================================
```


[Enter [news] Coefficients of the Quadratic Equation]

  - The 1º [coefficients(a)]:
 -_- Type the [new] value? 8

  - The 2º [coefficients(b)]:
 -_- Type the [new] value? -16

  - The 3º [coefficients(c)]:
 -_- Type the [new] value? 0

```
==============================
| . . . *[ EQUATION PROCESSING ]* . . . |
==============================
```

- The [new] incomplete Quadratic Equation are: [a*x² + b*x + 0 = 0] or [-a*x² - b*x + 0 = 0] or
- [-a*x² + b*x + 0 = 0] or [a*x² - b*x + 0 = 0] and will determine two [reals roots]: root1 and
     root2.

[Solution]

-- The first [real root] is 0.00
-- The second [real root] is 2.00

--[Algorithm: [RunAlgQuadratic_FirstLevel_Equation.py] ended Ok!]--

        . . .Key [ENTER] to exit, Ok!. . .

5.) The solution of the first level equation.


```
===============================================================================
|                **[ SOLVE THE QUADRATIC OR FIRSTLEVEL EQUATIONS ]**            |
|     -------------------------------------------------------------------------  |
|     **[ USING THE RUNALGQUADRATIC_FIRSTLEVEL_EQUATIONS.PY PROGRAM ]**         |
|     -------------------------------------------------------------------------  |
|                     . . . [ New Version: 5.0 (Stable) ] . . .                  |
===============================================================================
```

[Enter [news] Coefficients of the Quadratic Equation]

   - The 1º [coefficients(a)]:
 -_- Type the [new] value? 0

   - The 2º [coefficients(b)]:
 -_- Type the [new] value? 54

   - The 3º [coefficients(c)]:
 -_- Type the [new] value? -118

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              ==============================
              | . . . *[ EQUATION PROCESSING ]* . . . |
              ==============================
```


- The [new] first level Equation is determined when: a = 0 ==> [b*x + c] or [-b*x - c] or [b*x - c] or
   [-b*x + c].

- The [real root] will finded by: root = [(- self.coef_c) / self.coef_b] or root = [self.coef_c / (-
self.coef_b)] or root = [self.coef_c / self.coef_b] or root = [(- self.coef_c) / (-self.coef_b)].

[Solution]

-- The [real root] determined is -2.19

--[Algorithm: [RunAlgQuadratic_FirstLevel_Equation.py] ended Ok!]--

. . .Key [ENTER] to exit, Ok!. . .

6.) If the coefficients: a = b = c = 0 see below:


```
=====================================================================
|               **[ SOLVE THE QUADRATIC OR FIRSTLEVEL EQUATIONS ]**              |
|    -----------------------------------------------------------------------------------------   |
|     **[ USING THE RUNALGQUADRATIC_FIRSTLEVEL_EQUATIONS.PY PROGRAM ]**     |
|    -----------------------------------------------------------------------------------------   |
|                        . . . [ New Version: 5.0 (Stable) ] . . .                   |
=====================================================================
```

[Enter [news] Coefficients of the Quadratic Equation]

   - The 1º [coefficients(a)]:
 -_- Type the [new] value? 0

   - The 2º [coefficients(b)]:
 -_- Type the [new] value? 0

   - The 3º [coefficients(c)]:
 -_- Type the [new] value? 0

           _|=*=|_
            º < º   **[Warning!]**
            \ ~ /   --[No exist this Quadratic Equation: $0*x^2 + 0*x + 0 = 0$]--

[Enter [news] Coefficients of the Quadratic Equation]

   - The 1º [coefficients(a)]:
 -_- Type the [new] value? -3

   - The 2º [coefficients(b)]:
 -_- Type the [new] value? 22

   - The 3º [coefficients(c)]:
 -_- Type the [new] value? 35

--[[reals] Coefficients typed, Ok!]--


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| . . . *[ EQUATION PROCESSING ]* . . . |
==============================
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-- The [new] value of [delta] finded is 904.00
-- The value of [raisedelta] calculed is 30.07

[Solution]

-- The first [real root] is -1.34
-- The second [real root] is 8.68

--[Algorithm: [RunAlgQuadratic_FirstLevel_Equation.py] ended Ok!]--

. . .Key [ENTER] to exit, Ok!. . .

7.) If the coefficients: a = ? and b = c = 0 see below:


```
================================================================================
|                **[ SOLVE THE QUADRATIC OR FIRSTLEVEL EQUATIONS ]**            |
|      ------------------------------------------------------------------------  |
|     **[ USING THE RUNALGQUADRATIC_FIRSTLEVEL_EQUATIONS.PY PROGRAM ]**         |
|      ------------------------------------------------------------------------  |
|                     . . . [ New Version: 5.0 (Stable) ] . . .                  |
================================================================================
```


[Enter [news] Coefficients of the Quadratic Equation]

   - The 1º [coefficients(a)]:
 -_- Type the [new] value? 3

   - The 2º [coefficients(b)]:
 -_- Type the [new] value? 0

   - The 3º [coefficients(c)]:
 -_- Type the [new] value? 0

```
   ==============================
   | . . . *[ EQUATION PROCESSING ]* . . . |
   ==============================
```


[The coefficients finded an incomplete Quadratic Equation!]
[a*x²+ 0*x + 0 = 0] ==> [a*x² = 0] ==> [x² = 0 / a] ==> [x² = 0] ==> [x = root1 = root2 = zero]

[Solution]

-- The first [real root] is 0.00
-- The second [real root] is 0.00

--[Algorithm: [RunAlgQuadratic_FirstLevel_Equation.py] ended Ok!]--

         . . .Key [ENTER] to exit, Ok!. . .

8.) If the coefficients: a = 0, b = ? and c = 0 see below:


```
================================================================================
|                **[ SOLVE THE QUADRATIC OR FIRSTLEVEL EQUATIONS ]**            |
|      ------------------------------------------------------------------------  |
|     **[ USING THE RUNALGQUADRATIC_FIRSTLEVEL_EQUATIONS.PY PROGRAM ]**         |
|      ------------------------------------------------------------------------  |
|                     . . . [ New Version: 5.0 (Stable) ] . . .                  |
================================================================================
```

[Enter [news] Coefficients of the Quadratic Equation]

  - The 1º [coefficients(a)]:
-_- Type the [new] value? 0

  - The 2º [coefficients(b)]:
-_- Type the [new] value? 23

  - The 3º [coefficients(c)]:
-_- Type the [new] value? 0

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| . . . *[EQUATION PROCESSING]* . . . |
=============================

The [coefficients] found an incomplete first level Equation!]
[b*x + 0 = 0] ==> [b*x = 0] ==> [x = 0 / b] ==> [x = 0] ==> [x = root = zero]

[Solution]

-- The [real root] determined is 0.00

--[Algorithm: [RunAlgQuadratic_FirstLevel_Equation.py] ended Ok!]--

      . . .Key [ENTER] to exit, Ok!. . .

9.) Run with the new Version: 4.3 (Stable).

===
[SOLVE THE QUADRATIC OR FIRSTLEVEL EQUATIONS]
[USING THE RUNALGQUADRATIC_FIRSTLEVEL_EQUATIONS.PY PROGRAM]
. . . [New Version: 5.0 (Stable)] . . .
===

[Enter [news] Coefficients of the Quadratic Equation]

  - The 1º [coefficients(a)]:
-_- Type the [new] value? -17

  - The 2º [coefficients(b)]:
-_- Type the [new] value? h

  _/=_
  º<º   [Warning!]: could not convert string to float: 'h'
  \~/   [TYPE AN NEW [POSITIVE OR NEGATIVE OR ZERO] FLOAT NUMBER]
         [IN NEXT INSTRUCTION -- OK!]

-_- Type the [new] value? 22

  - The 3º [coefficients(c)]:
  -_- Type the [new] value? 33

--[[reals] Coefficients typed, Ok!]--

=============================
| . . . *[EQUATION PROCESSING]* . . . |
=============================

-- The [new] value of [delta] finded is 2728.00
-- The value of [raisedelta] calculed is 52.23

[Solution]

-- The first [real root] is -0.89
-- The second [real root] is 2.18

--[Algorithm: [RunAlgQuadratic_FirstLevel_Equation.py] ended Ok!]--

. . .Key [ENTER] to exit, Ok!. . .

Note: Until here, was show the all that the new [Version: 5.0] was generate the same results that the [Version: 4.3, Ok!]. Following below with [new examples] using only the [Version: 5.0].

(new) 10.) Find the [complexs roots] of the Quadratic Equation: -83*x² +135*x -57.5 = 0.

==
[SOLVE THE QUADRATIC OR FIRSTLEVEL EQUATIONS]
[USING THE RUNALGQUADRATIC_FIRSTLEVEL_EQUATIONS.PY PROGRAM]
. . . [New Version: 5.0 (Stable)] . . .
==

[Enter [news] Coefficients of the Quadratic Equation]

  - The 1º [coefficients(a)]:
  -_- Type the [new] value? -83

  - The 2º [coefficients(b)]:
  -_- Type the [new] value? 135

  - The 3º [coefficients(c)]:
  -_- Type the [new] value? -57.5

--[[reals] Coefficients typed, Ok!]--

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| . . . *[ EQUATION PROCESSING ]* . . . |
==============================
```

-- The [new] value of [delta] finded is -865.00
-- The value of [raisedelta] calculed is 0.00+29.41j

[WARNING!]
**
**[IF THE VALUE OF [DELTA] IS [NEGATIVE] THEN NO EXIST [REALS(|R) ROOTS]: ROOT1 AND
   ROOT2]]**
[WITH THE COEFICIENTS TYPED OF THIS EQUATION!]
[AND WILL FIND THE COMPLEXS(C) ROOTS : ROOT1 E ROOT2 OF THIS EQUATION --OK!]

[Solution]

-- The first [complex root] is 0.81-0.18j
-- The second [complex root] is 0.81+0.18j

--[Algorithm: [RunAlgQuadratic_FirstLevel_Equation.py] ended Ok!]--

      . . .Key [ENTER] to exit, Ok!. . .

(new) 11.) Find the [complexs roots] of the Quadratic Equation: $27850x^2 -1350x -11094 = 0$.


```
========================================================
|          **[ SOLVE THE QUADRATIC OR FIRSTLEVEL EQUATIONS ]**          |
|  -------------------------------------------------------------------------------  |
|    **[ USING THE RUNALGQUADRATIC_FIRSTLEVEL_EQUATIONS.PY PROGRAM ]**    |
|  -------------------------------------------------------------------------------  |
|                  . . . [ New Version: 5.0 (Stable) ] . . .                  |
========================================================
```


[Enter [news] Coefficients of the Quadratic Equation]

  - The 1º [coefficients(a)]:
 -_- Type the [new] value? 27850

  - The 2º [coefficients(b)]:
 -_- Type the [new] value? -1325

  - The 3º [coefficients(c)]:
 -_- Type the [new] value? -11094

--[[reals] Coefficients typed, Ok!]--


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| . . . *[ EQUATION PROCESSING ]* . . . |
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```

-- The [new] value of [delta] finded is 1237627225.00
-- The value of [raisedelta] calculed is 35179.93

[Solution]

-- The first [real root] is 0.66
-- The second [real root] is -0.61

--[Algorithm: [RunAlgQuadratic_FirstLevel_Equation.py] ended Ok!]--

. . .Key [ENTER] to exit, Ok!. . .

(new) 12.) Find the [complexs roots] of the Quadratic Equation: -63442.5*x² -7102*x -28094.15 = 0


```
==========================================================================
|            **[ SOLVE THE QUADRATIC OR FIRSTLEVEL EQUATIONS ]**          |
|    -------------------------------------------------------------------  |
|     **[ USING THE RUNALGQUADRATIC_FIRSTLEVEL_EQUATIONS.PY PROGRAM ]**    |
|    -------------------------------------------------------------------  |
|                  . . . [ New Version: 5.0 (Stable) ] . . .              |
==========================================================================
```


[Enter [news] Coefficients of the Quadratic Equation]

  - The 1º [coefficients(a)]:
 -_- Type the [new] value? -63442.5

  - The 2º [coefficients(b)]:
 -_- Type the [new] value? -7102

  - The 3º [coefficients(c)]:
 -_- Type the [new] value? -28094.15

--[[reals] Coefficients typed, Ok!]--


```
==============================
| . . . *[ EQUATION PROCESSING ]* . . . |
==============================
```


-- The [new] value of [delta] finded is -7079014041.50
-- The value of [raisedelta] calculed is 0.00+84136.88j

[WARNING!]
**
**[IF THE VALUE OF [DELTA] IS [NEGATIVE] THEN NO EXIST [REALS(|R) ROOTS]: ROOT1 AND
    ROOT2]]**
[WITH THE COEFICIENTS TYPED OF THIS EQUATION!]
[AND WILL FIND THE COMPLEXS(C) ROOTS : ROOT1 E ROOT2 OF THIS EQUATION -- OK!]

[Solution]

-- The first [complex root] is -0.06-0.66j
-- The second [complex root] is -0.06+0.66j

--[Algorithm: [RunAlgQuadratic_FirstLevel_Equation.py] ended Ok!]--

. . .Key [ENTER] to exit, Ok!. . .

[End Note] – Solve any Quadratic or First Level Equations using the new [Version: 5.0] of the [RunAlgQuadratic_FirstLevel_Equation.py] or [RunRealsComplexRoots.py]programs.

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