Programming the Casio fx-9750/9860 QUAD

Note Title 2014-08-06

The Quadratic Formula

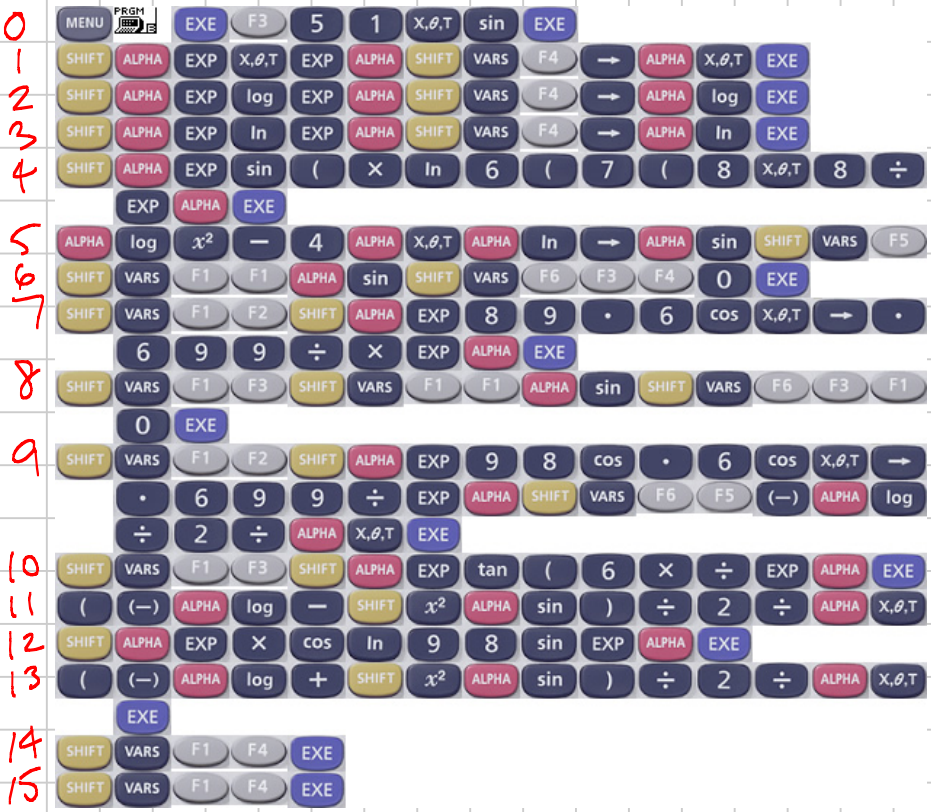
Recall: $ax^2+bx+c=0$ $\qquad x=\dfrac{-b\pm\sqrt{b^2-4ac}}{2a}$

discriminant $\equiv b^2-4ac$

- <0 no real roots
- $=0$ one real root
- >0 two real roots

```
0 ======QUAD      ======
1 "A"?→A↵
2 "B"?→B↵
3 "C"?→C↵
4 "DISCRIMINANT"↵
5 B²-4AC→D◢
6 If D<0↵
7 Then "NO REAL ROOTS"↵
8 Else If D=0↵
9 Then "ONE REAL ROOT":
  -B÷2÷A↵
10 Else "FIRST"↵
11 (-B-√(D)÷2÷A◢
12 "SECOND"↵
13 (-B+√(D)÷2÷A↵
14 IfEnd↵
15 IfEnd
```

TOP BTM SRC MENU A⇔a CHAR



Test the following values to make sure everything is entered correctly. Press EXIT 3 times, then F1.

```
A?
1
B?
2
C?
3
DISCRIMINANT
                    -8
NO REAL ROOTS
```

```
A?
1
B?
2
C?
1
DISCRIMINANT
                     0
ONE REAL ROOT
                    -1
```

```
A?
1
B?
2
C?
0
DISCRIMINANT
                     4
FIRST
                    -2
SECOND
                     0
```