

Quadratic Formula Program

This program will display the solutions of a quadratic equation or the words "No Real Solution." To use the program, write the quadratic equation in general form and enter the values of a , b , and c .

```
PROGRAM:QUADRAT
:DISP "AX2+BX+C=0"
:INPUT "ENTER A",A
:INPUT "ENTER B",B
:INPUT "ENTER C",C
:B2-4AC→D
:IF D≥0
:THEN
:(-B+√D)/(2A)→M
:DISP M
:(-B-√D)/(2A)→N
:DISP N
:ELSE
:DISP "NO REAL SOLUTION"
:END
```

Graph Reflection Program

This program will graph a function f and its reflection in the line $y = x$. To use this program, enter the function in Y_1 and set a viewing rectangle.

```
PROGRAM:REFLECT
:47XMIN/63→YMIN
:47XMAX/63→YMAX
:XSCL→YSCL
:"X"→Y2
:DISPGRAPH
:(XMAX-XMIN)/62→I
:XMIN→X
:LBL A
:PT-ON(Y1,X)
:X+I→X
:IF X>XMAX
:STOP
:GOTO A
```

Systems of Linear Equations Program

This program will display the solution of a system of two linear equations in two variables of the form

$$ax + by = c$$

$$dx + ey = f$$

if a unique solution exists.

```
PROGRAM:SOLVE
:DISP "AX+BY=C"
:INPUT "ENTER A",A
:INPUT "ENTER B",B
:INPUT "ENTER C",C
:DISP "DX+EY=F"
:INPUT "ENTER D",D
:INPUT "ENTER E",E
:INPUT "ENTER F",F
:IF AE-DB=0
:THEN
:DISP "NO UNIQUE"
:DISP "SOLUTION"
:ELSE
:(CE-BF)/(AE-DB)→X
:(AF-CD)/(AE-DB)→Y
:DISP X
:DISP Y
:END
```

Visualizing Row Operations Program not available

Evaluating an Algebraic Expression Program

This program can be used to evaluate an algebraic expression in one variable at several values of the variable. To use this program, enter an expression in Y_1 .

```
PROGRAM:EVALUAT
:LBL A
:INPUT "ENTER X",X
:DISP Y1
:GOTO A
```