

Simple Interest Program

This program can be used to find the amount of simple interest earned on a given principal at a given annual interest rate for a certain amount of time.

```
Prgm1:SIMPINT
:Fix 2
:Disp "PRINCIPAL"
:Input P
:Disp "INTEREST RATE"
:Disp "IN DECIMAL FORM"
:Input R
:Disp "NUMBER OF YEARS"
:Input T
:PRT →I
:Disp "THE INTEREST IS"
:Disp I
:Float
```

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 .

```
Prgm3: QUADRAT
:Disp "ENTER A"
:Input A
:Disp "ENTER B"
:Input B
:Disp "ENTER C"
:Input C
: $B^2 - 4AC \rightarrow D$ 
:If  $D < 0$ 
:Goto 1
: $((-B + \sqrt{D})/(2A)) \rightarrow M$ 
:Disp M
: $((-B - \sqrt{D})/(2A)) \rightarrow N$ 
:Disp N
:End
:Lbl 1
:Disp "NO REAL"
:Disp "SOLUTION"
:End
```

Two-Point Form of a Line Program

This program will display the slope and y -intercept of the line that passes through two points, (x_1, y_1) and (x_2, y_2) , entered by the user.

```
Prgm2:TWOPTFM
:Disp "ENTER X1, Y1"
:Input X
:Input Y
:Disp "ENTER X2, Y2"
:Input C
:Input D
: $(D - Y)/(C - X) \rightarrow M$ 
: $M * (-X) + Y \rightarrow B$ 
:Disp "SLOPE ="
:Disp M
:Disp "Y-INT ="
:Disp B
```

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.

```
Prgm4:REFLECT
:2Xmin/3 → Ymin
:2Xmax/3 → Ymax
:Xscl → Yscl
:"X" → Y2
:DispGraph
: $(Xmax - Xmin)/95 \rightarrow I$ 
:Xmin → X
:Lbl 1
:Pt-On(Y1,X)
:X+I → X
:If  $X > Xmax$ 
:End
:Goto 1
```

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.

```
Prgm5:SOLVE
:Disp "AX+BY=C"
:Input A
:Input B
:Input C
:Disp "DX+EY=F"
:Input D
:Input E
:Input F
:If AE-DB=0
:Goto 1
:(CE-BF)/(AE-DB)→X
:(AF-CD)/(AE-DB)→Y
:Disp X
:Disp Y
:End
:Lbl 1
:Disp "NO UNIQUE SOLUTION"
:End
```