

TI-85 TI-86

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.

```
PROGRAM:SIMPINT
:Fix 2
:Disp "Principal"
:Input P
:Disp "Interest rate"
:Disp "in decimal form"
:Input R
:Disp "Number of years"
:Input T
:P*R*T → 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 . This program gives both real and complex answers. Solutions of a quadratic equation are also available directly by using the POLY function.

```
PROGRAM:QUADRAT
:Disp "AX^2+BX+C=0"
:Input "ENTER A",A
:Input "ENTER B",B
:Input "ENTER C",C
:B^2-4*A*C → D
:(-B+√D)/(2A) → M
:Disp M
:(-B-√D)/(2A) → N
:Disp N
```

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.

```
PROGRAM:TWOPTFM
:Disp "ENTER X1, Y1"
:Input X
:Input Y
:Disp "Enter X2, Y2"
:Input C
:Input D
:(D-Y)/(C-X) → M
:M*(-X)+Y → 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 $y1$ and set a viewing rectangle.

```
PROGRAM:REFLECT
:63*xMin/127 → yMin
:63*xMax/127 → yMax
:xScl → yScl
:y2=x
:DispG
:(xMax-xMin)/126 → I
:xMin → x
:Lbl A
:PtOn(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 A*E-D*B==0
:Goto A
:(C*E-B*F)/(A*E-D*B) → X
:(A*F-C*D)/(A*E-D*B) → Y
:Disp X
:Disp Y
:Stop
:Lbl A
:Disp "NO UNIQUE SOLUTION"
```