

TI-82 TI-83

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
: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 .

```
PROGRAM:QUADRAT
:Disp "AX2+BX+C=0"
:Prompt A
:Prompt B
:Prompt 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
```

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 Y_1 and set a viewing rectangle.

```
PROGRAM:REFLECT
:63Xmin/95 → Ymin
:63Xmax/95 → Ymax
:Xscl → Yscl
:"X" → Y2
:DispGraph
:(Xmax-Xmin)/94 → I
:Xmin → X
:While X ≤ Xmax
:Pt-On(Y1,X)
:X+I → X
:End
```

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"

:Prompt A

:Prompt B

:Prompt C

:Disp "DX+EY=F"

:Prompt D

:Prompt E

:Prompt 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