

TI-92

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.

```
:simpint ( )
:Prgm
:setMode("Display Digits", "Fix 2")
:Input "Principal", p
:Input "Interest rate in decimal form", r
:Input "Number of years", t
:p*r*t → i
:Disp "The interest is", i
:setMode("Display Digits", "Float")
:EndPrgm
```

Quadratic Formula Program

This program will display the solutions to quadratic equations or the words "No Real Solution." To use the program, write the quadratic equation in standard form and enter the values of a , b , and c . This program gives both real and complex answers.

```
:quadrat ( )
:Prgm
:setMode("Complex Format",
  "RECTANGULAR")
: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))/(2*a) → m
:(-b-√(d))/(2*a) → n
:Disp m
:Disp n
:setMode("Complex Format", "REAL")
:EndPrgm
```

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.

```
:twoptfm ( )
:Prgm
: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
:EndPrgm
```

Reflections and Shifts Program

This program will sketch a graph of the function $y = R(x + H)^2 + V$, where $R = \pm 1$, H is an integer between -6 and 6 , and V is an integer between -3 and 3 . This program gives you practice working with reflections, horizontal shifts, and vertical shifts.

```

Parabola( )
Prgm
ClrHome
ClrIO
setMode("Split Screen",
  "Left-Right")
setMode("Split 1 App","Home")
setMode("Split 2 App","Graph")
-6+int(12rand())→h
-3+int(6rand())→v
rand()→r
If r<.5 Then
  -1→r
  Else
  1→r
EndIf
r*(x+h)^2+v→y1(x)
-9→xmin
9→xmax
1→xscl
-6→ymin
6→ymax
1→yscl
DispG
Disp "y1(x)=r(x+h)^2+v"
Output 20,1,"r=":Output 20,11,r
Output 40,1,"h=":Output 40,11,h
Output 60,1,"v=":Output 60,11,v
Pause
setMode("Split Screen","Full")
EndPrgm

```

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.

```

Prgm
103xmin/239→ymin
103xmax/239→ymax

```

```

xscl→yscl
x→y2(x)
DispG
(xmax-xmin)/238→n
xmin→x
While x<xmax
  PtOn y1(x),x
  x+n→x
EndWhile
EndPrgm

```

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.

```

Solve( )
Prgm
ClrIO
Disp "Ax+By=C"
Input "Enter A.:",a
Input "Enter B.:",b
Input "Enter C.:",c
ClrIO
Disp "Dx+Ey=F"
Input "Enter D.:",d
Input "Enter E.:",e
Input "Enter F.:",f
If a*e-d*b=0 Then
  Disp "No unique solution"
Else
  (c*e-b*f)/(a*e-d*b)→x
  (a*f-c*d)/(a*e-d*b)→y
  Disp x
  Disp y
EndIf
EndPrgm

```

Sum Program

```

Summatn( )
Prgm
Input "Enter lower limit.",m
Input "Enter upper limit.",n
Σ(y1(x),x,m,n)→s
Disp "The partial sum is",s
EndPrgm

```