

Sharp EL-9200C Sharp EL-9300C

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
-----REAL
Input principal
Print "Interest rate
Print "in decimal form
Input rate
Print "Number of years
Input time
interest=principal*rate*time
Print interest
```

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.

```
quadratic
-----COMPLEX
Print "ax2+bx+c=0"
Input a
Input b
Input c
d=b2-4a*c
x1=(-b+√ d)/(2a)
x2=(-b-√ d)/(2a)
Print x1
Print x2
End
```

Two-Point Form of a Line

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.

```
twoptform
Print "enter x1, y1
Input x
c=x
Input y
d=y
Print "enter x2, y2
Input x
Input y
m=(d-y)/(c-x)
b=m*(-x)+y
Print "slope
Print m
Print "y-int
Print b
```

Graph Reflection Program

This program will graph a function f and its reflection in the line $y = x$. To use this program, replace $f(X)$ with your expression in X .

```
reflection
-----REAL
Goto top
Label equation
Y=f(X)
Return
Label rng
xmin=-10
xmax=10
xstp=(xmax-xmin)/10
ymin=2*xmin/3
ymax=2*xmax/3
ystp=xstp
Range xmin,xmax,xstp,ymin,
    ymax,ystp
Return
Label top
Gosub rng
Graph X
step=(xmax-xmin)/(94*2)
X=xmin
Label 1
Gosub equation
Plot X,Y
Plot Y, X
X=X+step
If X<=xmax Goto 1
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. Equations must be entered in the form: $AX + BY = C$; $DX + EY = F$. Uppercase letters are used so that the values can be accessed in the calculation mode of the calculator.

```
solve
-----REAL
Print "AX+BY=C"
Input A
Input B
Input C
Print "DX+EY=F"
Input D
Input E
Input F
If A*E-D*B=0 Goto 1
X=(C*E-B*F)/(A*E-D*B)
Y=(A*F-C*D)/(A*E-D*B)
Print X
Print Y
End
Label 1
Print "no unique solution"
End
```