AREA PROGRAM:

Disp "1-Rectangle"
Disp "2-Circle"
Disp "3-Triangle"

Input ("DETERMINE AREA FOR #",N)

If N=1
Then
Input ("LENGTH: ",L)
Input ("WIDTH: ",W)
L*W→A
Else
If N=2
Then
Input ("RADIUS: ",R)
π*R^2→A
Else
Input ("LENGTH: ",L)
Input ("HEIGHT: ",H)
(L*H)/2→A
End
End
Disp "AREA: "+toString(A)

RECURSIVE SEQUENCE PROGRAM:

ClrHome
Disp "NUMBER OF SEATS"
Disp "AT N TABLES"

Prompt N
ClrList L₁,L₂

4→S
1→L₁(1)
S→L₂(1)

If N>1
Then
For(T,2,N)
T→L₁(T)
S+2→S
S→L₂(T)
End
End
Disp "NUMBER OF SEATS: ",S
Disp "NUMBER OF TABLES: ",N

Lucky “Eu”

ClrHome
Disp "CAN YOU GUESS EULER'S"
Disp "LUCKY NUMBERS?"
Prompt N

1→A
0→Q
"is it lucky"
While A≤N-1 and Q=0

A²-A+N→P
"is it prime?"
For(M,2,P-1)
If int(P/M)=P/M
Then
1→Q
End
End
A+1→A
If Q=0 and N>1
Then
Disp "YES, "+toString(N)+" IS LUCKY"
Else
Disp "NO, "+toString(N)+" ISN'T LUCKY"
End

Coding with TI-Innovator Rover:

LEFT TURN PROGRAM:

Send("CONNECT RV")
Send("RV FORWARD 0.5 M")
Send("RV LEFT ")
Send("RV FORWARD 0.5 M")

NAVIGATION CHALLENGE: Use the FORWARD and LEFT commands to have rover navigate the course setup below. For simplicity sake, the distances required are 0.5 M, 0.85 M, 0.52 M and 0.3 M respectively.
Square Root “Newt”

ClrHome
Disp "Determine Square Roots"
Disp "Numerically. Input A,"
Disp "returns Sqrt(A), and"
Disp "iterations required"
Disp "based on the initial"
Disp "guess, G."

Prompt A,G
1→I
(1/2)(G+A/G)→R

While R≠√(A)
(1/2)(R+A/R)→R
1+I→I
Disp R
Disp I
Wait .5
End

ClrHome
Disp "approx root is"
Disp R
Disp "with "+toString(I)+" iterations"

Approximate e

ClrHome
Disp "THIS PROGRAM APPROXIMATES"
Disp "e BY SUMMING 1/(n!)."
Disp "ENTER A POSITIVE NUMBER"
Disp "FOR N AND SEE HOW QUICKLY"
Disp "THE SUM APPROACHES e."
Disp ""
Prompt N
1→E
If N≥1
Then
For(M,1,N)
E+1/M!→E
Disp E
Wait .5
End
Else
Disp "N MUST BE POSITIVE"
End

Random Sample from L1

dim(L₁)→A
Input ("Sample Size: ",B)
Input ("With Repeats(Y/N): ",Str1)
If Str1="Y"
Then
ClrList L₃,L₂
For(C,1,B)
L₁(randInt(1,A))→L₂(C)
End
ClrHome
Disp "Sample stored in L₂"
Disp L₂
Else
ClrList L₃,L₂
randIntNoRep(1,A)→L₃
For(C,1,B)
L₁(L₃(C))→L₂(C)
End
ClrList L₃
ClrHome
Disp "Sample stored in L₂"
Disp L₂
End