Sharp EL-9900
Graphing Calculator

Basic Keyboard Activities

General Mathematics

Algebra

Programming

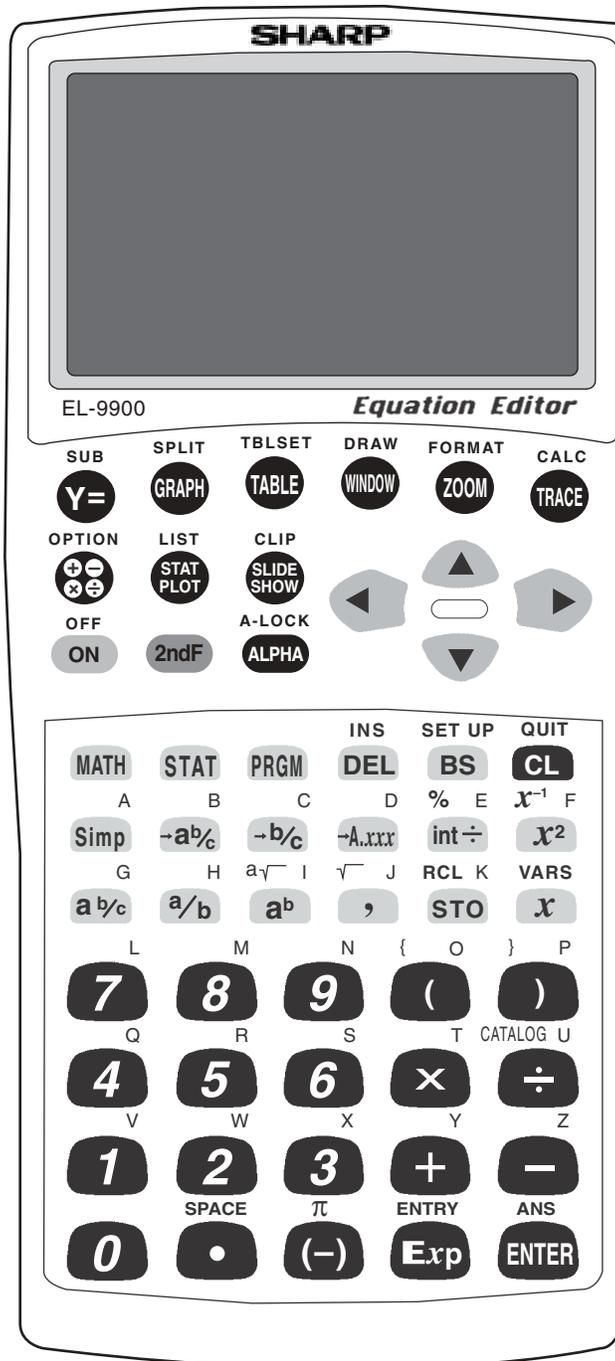## Advanced Keyboard Activities

Algebra

Calculus

Statistics

Trigonometry

Programming

Sharp EL-9900
Graphing Calculator
Basic Keypad

CREATING A NEW PROGRAM

1. The Basic keyboard can only execute a program. Use the Advanced Keyboard to enter and check the program.

2. Turn the calculator on and press $\boxed{\text{PRGM}}$ to enter the programming menu. The menu consists of commands to execute, edit, and create new programs.

3. Press $\boxed{\text{C}}$ **(NEW)** and $\boxed{\text{ENTER}}$ to open a new program. The calculator is now locked in ALPHA mode and is prepared to accept a name for the new program. Enter the program name.

4. You can now enter the program. All program commands are obtained in the program menu. You cannot type program commands using the $\boxed{\text{ALPHA}}$ key. To reach this menu, press $\boxed{\text{PRGM}}$. All the program commands begin with an uppercase letter.

5. Press $\boxed{\text{CL}}$ to exit the program commands. When entering a new program, you must press $\boxed{\text{ENTER}}$ at the end of each line.

6. If you make a mistake entering a program, use the calculator's editing feature to correct the error. First, you can press the arrow keys to move around the program. Second, you can use the $\boxed{\text{DEL}}$ key which deletes a highlighted item, the $\boxed{\text{BS}}$ key which backspace deletes an item, and the $\boxed{\text{2ndF}}$ $\boxed{\text{INS}}$ keys which allow you to insert new items. Third, the calculator operates in typeover mode which allows you to simply type over a mistake. You must press $\boxed{\text{ENTER}}$ after correcting a mistake for the correction to be saved for future use.

Basic Keyboard/PROGRAMMING USING THE SHARP EL-9900

EXECUTING A PROGRAM

1. After entering the program with the Advanced Keyboard, press ⎡2ndF⎤ ⎡QUIT⎤ to save the program and exit the editing mode.

2. Execute a program by pressing ⎡PRGM⎤ ⎡A⎤ **(EXEC)** and select the program using the arrow keys and press ⎡ENTER⎤ .

3. If you receive an error statement, press ⎡◀⎤ ⎡▶⎤ to go to the line within the program in which the error occurs. Compare your line with the correct one above to find the error. Correct the error using the editing features of the calculator and press ⎡ENTER⎤ to save the correction. Press ⎡2ndF⎤ ⎡QUIT⎤ and try to execute the program again.

4. Once the program is working, you can execute the program from the Basic Keyboard.

PRIME FACTORIZATION

1. Program the calculator to find the prime factorization of a whole number greater than 2. This method decomposes a number into the prime factors 2, 3, 5, etc.

2. Create a new program with the name DECOMP. Enter the following program and remember to press | ENTER | at the end of each line. If you make a mistake, use the calculator's editing features to correct the error.

3. Enter the following program using the Advanced Keyboard:

Input N		PRGM		A		3		ALPHA		N		ENTER	
2⇒D		2		STO		ALPHA		D		ENTER	
Label A		PRGM		B		0		1		ALPHA		A		ENTER	
If (N÷D) = int		PRGM		B		0		3		(		ALPHA		N		÷	
(N÷D) Goto B		ALPHA		D		)		ALPHA		=		MATH		B		0		5	
		(		ALPHA		N		÷		ALPHA		D		)	
		PRGM		B		0		2		ALPHA		B		ENTER	
D+1⇒D		ALPHA		D		+		1		STO		ALPHA		D	
		ENTER	
If D ≤ √N Goto A		PRGM		B		0		3		ALPHA		D		MATH	
		F		6		2ndF		√		ALPHA		N		PRGM	
		B		0		2		ALPHA		A		ENTER	
Goto C		PRGM		B		0		2		ALPHA		C		ENTER	
Label B		PRGM		B		0		1		ALPHA		B		ENTER	
N÷D⇒N		ALPHA		N		÷		ALPHA		D		STO		ALPHA	
		N		ENTER	
Print D		PRGM		A		1		ALPHA		D		ENTER	
Goto A		PRGM		B		0		2		ALPHA		A		ENTER	
Label C		PRGM		B		0		1		ALPHA		C		ENTER	
Print N		PRGM		A		1		ALPHA		N		ENTER	
End		PRGM		A		6		ENTER	

Press | 2ndF | | QUIT | to exit the editor.

Basic Keyboard/PROGRAMMING USING THE SHARP EL-9900

PRIME FACTORIZATION (continued)

4. Execute the DECOMP program from the Basic Keyboard by pressing
    ⌷PRGM⌷ and selecting **DECOMP**. Enter the number for which you want to
    find the prime factorization.   Try 56. Press ⌷5⌷ ⌷6⌷ ⌷ENTER⌷ to find the
    prime factorization of 56. You should then see the following prime
    factorization.

```
DECOMP
_____

N=
56
                          2
                          2
                          2
                          7
```

You can repeat this program for other numbers by pressing ⌷ENTER⌷
to execute the program over and over again. Press ⌷CL⌷ to clear the
screen.

Basic Keyboard/PROGRAMMING USING THE SHARP EL-9900

COMMON FACTORS

1. Program the calculator to find the common factors and the greatest common factor of any pair of whole numbers.

2. Create a new program with the name FACTORS. Enter the following program and remember to press $\boxed{\text{ENTER}}$ at the end of each line. If you make a mistake, use the calculator's editing features to correct the error.

3. Enter the following program using the Advanced Keyboard:

Input A	$\boxed{\text{PRGM}}$ $\boxed{\text{A}}$ $\boxed{3}$ $\boxed{\text{ALPHA}}$ $\boxed{\text{A}}$ $\boxed{\text{ENTER}}$
Input B	$\boxed{\text{PRGM}}$ $\boxed{\text{A}}$ $\boxed{3}$ $\boxed{\text{ALPHA}}$ $\boxed{\text{B}}$ $\boxed{\text{ENTER}}$
2⇒D	$\boxed{2}$ $\boxed{\text{STO}}$ $\boxed{\text{ALPHA}}$ $\boxed{\text{D}}$ $\boxed{\text{ENTER}}$
Label A	$\boxed{\text{PRGM}}$ $\boxed{\text{B}}$ $\boxed{0}$ $\boxed{1}$ $\boxed{\text{ALPHA}}$ $\boxed{\text{A}}$ $\boxed{\text{ENTER}}$
If fpart (A÷D)π0	$\boxed{\text{PRGM}}$ $\boxed{\text{B}}$ $\boxed{0}$ $\boxed{3}$ $\boxed{\text{MATH}}$ $\boxed{\text{B}}$ $\boxed{4}$ $\boxed{(}$
Goto B	$\boxed{\text{ALPHA}}$ $\boxed{\text{A}}$ $\boxed{÷}$ $\boxed{\text{ALPHA}}$ $\boxed{\text{D}}$ $\boxed{)}$ $\boxed{\text{MATH}}$ $\boxed{\text{F}}$
	$\boxed{2}$ $\boxed{0}$ $\boxed{\text{PRGM}}$ $\boxed{\text{B}}$ $\boxed{0}$ $\boxed{2}$ $\boxed{\text{ALPHA}}$ $\boxed{\text{B}}$
	$\boxed{\text{ENTER}}$
If fpart (B÷D)π0	$\boxed{\text{PRGM}}$ $\boxed{\text{B}}$ $\boxed{0}$ $\boxed{3}$ $\boxed{\text{MATH}}$ $\boxed{\text{B}}$ $\boxed{4}$ $\boxed{(}$
Goto B	$\boxed{\text{ALPHA}}$ $\boxed{\text{B}}$ $\boxed{÷}$ $\boxed{\text{ALPHA}}$ $\boxed{\text{D}}$ $\boxed{)}$ $\boxed{\text{MATH}}$ $\boxed{\text{F}}$
	$\boxed{2}$ $\boxed{0}$ $\boxed{\text{PRGM}}$ $\boxed{\text{B}}$ $\boxed{0}$ $\boxed{2}$ $\boxed{\text{ALPHA}}$ $\boxed{\text{B}}$
	$\boxed{\text{ENTER}}$
Print D	$\boxed{\text{PRGM}}$ $\boxed{\text{A}}$ $\boxed{1}$ $\boxed{\text{ALPHA}}$ $\boxed{\text{D}}$ $\boxed{\text{ENTER}}$
Label B	$\boxed{\text{PRGM}}$ $\boxed{\text{B}}$ $\boxed{0}$ $\boxed{1}$ $\boxed{\text{ALPHA}}$ $\boxed{\text{B}}$ $\boxed{\text{ENTER}}$
D+1⇒D	$\boxed{\text{ALPHA}}$ $\boxed{\text{D}}$ $\boxed{+}$ $\boxed{1}$ $\boxed{\text{STO}}$ $\boxed{\text{ALPHA}}$ $\boxed{\text{D}}$
	$\boxed{\text{ENTER}}$
If D≤min(A,B)	$\boxed{\text{PRGM}}$ $\boxed{\text{B}}$ $\boxed{0}$ $\boxed{3}$ $\boxed{\text{ALPHA}}$ $\boxed{\text{D}}$ $\boxed{\text{MATH}}$
Goto A	$\boxed{\text{F}}$ $\boxed{6}$ $\boxed{\text{MATH}}$ $\boxed{\text{B}}$ $\boxed{6}$ $\boxed{\text{ALPHA}}$ $\boxed{\text{A}}$ $\boxed{,}$
	$\boxed{\text{ALPHA}}$ $\boxed{\text{B}}$ $\boxed{)}$ $\boxed{\text{PRGM}}$ $\boxed{\text{B}}$ $\boxed{0}$ $\boxed{2}$
	$\boxed{\text{ALPHA}}$ $\boxed{\text{A}}$ $\boxed{\text{ENTER}}$
End	$\boxed{\text{PRGM}}$ $\boxed{\text{A}}$ $\boxed{6}$ $\boxed{\text{ENTER}}$

COMMON FACTORS (continued)

4. Execute the FACTORS program from the Basic Keyboard by pressing
   PRGM and selecting **FACTORS**. Enter the numbers for which you
   want to find the common factors. Try 60 and 48. Press 6 0 ENTER
   4 8 ENTER to find the common factors of 60 and 48. You should
   then see the following common factors.

```
60
B=
48
                    2
                    3
                    4
                    6
                    12
```

You can repeat this program for other numbers by pressing ENTER to
execute the program over and over again. Press CL to clear the screen.

Basic Keyboard/PROGRAMMING USING THE SHARP EL-9900

SYNTHETIC DIVISION

1. Program the calculator to perform synthetic division of a polynomial by a linear divisor.

2. Create a new program with the name **SYNTHETI**. Enter the following program and remember to press ENTER at the end of each line. If you make a mistake, use the calculator's editing features to correct the error.

3. Enter the following program using the Advanced Keyboard:

Input D	PRGM A 3 ALPHA D ENTER
0⇒P	0 STO ALPHA P ENTER
{D+1,1}⇒	2ndF { ALPHA D + 1 , 1 2ndF
dim(mat A)	} STO 2ndF MATRIX C 0 1 2ndF
	MATRIX A 1) ENTER
Print "COEFFIC	PRGM A 1 PRGM 2
IENTS P(X)	2ndF A-LOCK C O E F F I
	C I E N T S SPACE P ALPHA
	(X/θ/T/n) ENTER
Label A	PRGM B 0 1 ALPHA A ENTER
P+1⇒P	ALPHA P + 1 STO ALPHA P
	ENTER
Input C	PRGM A 3 ALPHA C ENTER
C⇒mat A(P,1)	ALPHA C STO 2ndF MATRIX A 1 (
	ALPHA P , 1) ENTER
If P<D+1	PRGM B 0 3 ALPHA P MATH
Goto A	F 5 ALPHA D + 1 PRGM
	B 0 2 ALPHA A ENTER
Label B	PRGM B 0 1 ALPHA B ENTER
Input R	PRGM A 3 ALPHA R ENTER
Label C	PRGM B 0 1 ALPHA C ENTER
1⇒P	1 STO ALPHA P ENTER
0⇒S	0 STO ALPHA S ENTER

SYNTHETIC DIVISION (continued)

Print "COEFFIC	PRGM	A	1	PRGM	2		
IENTS Q(X)	2ndF	A-LOCK	C	O	E	F	F	I	C
	I	E	N	T	S	SPACE	Q	ALPHA	(
	X/θ/T/n	)	ENTER				
Label D	PRGM	B	0	1	ALPHA	D	ENTER
mat A(P,1)⇒F	2ndF	MATRIX	A	1	(	ALPHA	P	,	1
	)	STO	ALPHA	F	ENTER		
F+S⇒Q	ALPHA	F	+	ALPHA	S	STO	ALPHA
	Q	ENTER					
Print Q	PRGM	A	1	ALPHA	Q	ENTER	
Wait	PRGM	A	4	ENTER			
R×Q⇒S	ALPHA	R	×	ALPHA	Q	STO	ALPHA
	S	ENTER					
P+1⇒P	ALPHA	P	+	1	STO	ALPHA	P
	ENTER						
If P<D+1	PRGM	B	0	3	ALPHA	P	MATH
Goto D	F	5	ALPHA	D	+	1	PRGM	B	0
	2	ALPHA	D	ENTER			
mat A(P,1)⇒F	2ndF	MATRIX	A	1	(	ALPHA	P	,	1	)
	STO	ALPHA	F	ENTER			
F+S⇒Q	ALPHA	F	+	ALPHA	S	STO	ALPHA
	Q	ENTER					
Print	PRGM	A	1	PRGM	2	2ndF	
"REMAINDER	A-LOCK	R	E	M	A	I	N	D	E	R
	ALPHA	ENTER					
Print Q	PRGM	A	1	ALPHA	Q	ENTER	
End	PRGM	A	6	ENTER			

Press [2ndF] [QUIT] to exit the editor.

SYNTHETIC DIVISION (continued)

4. Execute the SYNTHETI program from the Basic Keyboard by pressing
   PRGM and selecting **SYNTHETI**. Use synthetic division to divide
   $P(x) = 2x^3 + 3x^2 + 4x + 5$ by $x – 1$. Enter the degree for $P(x)$ by pressing
   3 ENTER . Next enter the coefficients and constant for $P(x)$ by pressing
   2 ENTER 3 ENTER 4 ENTER 5 ENTER . Enter the r
   value of 1 by pressing 1 ENTER . The first coefficient of $Q(x)$ will
   appear. Press ENTER to see additional coefficients. The remainder will
   be shown to end the program. You should then see the following
   coefficients, constant and remainder ($Q(x) = 2x^2 + 5x + 9$, remainder = 14).

```
R=
1
COEFFICIENTS Q(X)
                  2
                  5
                  9

REMAINDER
              14
```

You can repeat this program for other numbers by pressing ENTER to
execute the program over and over again. Press CL to clear the screen.

Basic Keyboard/PROGRAMMING USING THE SHARP EL-9900

RANDOM WALKS

1. Program the calculator to graph a random walk. A random walk can go in any direction for a random distance. This program stops when the graph tries to go outside the calculator display.

2. Create a new program with the name WALK. Enter the following program and remember to press ⎡ENTER⎤ at the end of each line. If you make a mistake, use the calculator's editing features to correct the error.

3. Enter the following program using the Advanced Keyboard:

ClrDraw	⎡2ndF⎤ ⎡DRAW⎤ ⎡A⎤ ⎡1⎤ ⎡ENTER⎤
0⇒D	⎡0⎤ ⎡STO⎤ ⎡ALPHA⎤ ⎡D⎤ ⎡ENTER⎤
.5⇒X	⎡.⎤ ⎡5⎤ ⎡STO⎤ ⎡X/θ/T/n⎤ ⎡ENTER⎤
.5⇒Y	⎡.⎤ ⎡5⎤ ⎡STO⎤ ⎡ALPHA⎤ ⎡Y⎤ ⎡ENTER⎤
Label A	⎡PRGM⎤ ⎡B⎤ ⎡0⎤ ⎡1⎤ ⎡ALPHA⎤ ⎡A⎤ ⎡ENTER⎤
.2(random−.5)⇒H	⎡.⎤ ⎡2⎤ ⎡(⎤ ⎡MATH⎤ ⎡C⎤ ⎡1⎤ ⎡−⎤ ⎡.⎤ ⎡5⎤ ⎡)⎤ ⎡STO⎤
	⎡ALPHA⎤ ⎡H⎤ ⎡ENTER⎤
.2(random−.5)⇒K	⎡.⎤ ⎡2⎤ ⎡(⎤ ⎡MATH⎤ ⎡C⎤ ⎡1⎤ ⎡−⎤ ⎡.⎤ ⎡5⎤ ⎡)⎤ ⎡STO⎤
	⎡ALPHA⎤ ⎡K⎤ ⎡ENTER⎤
Line(X,Y,X+H,	⎡2ndF⎤ ⎡DRAW⎤ ⎡A⎤ ⎡2⎤ ⎡X/θ/T/n⎤ ⎡,⎤ ⎡ALPHA⎤
Y+K)	⎡Y⎤ ⎡,⎤ ⎡X/θ/T/n⎤ ⎡+⎤ ⎡ALPHA⎤ ⎡H⎤ ⎡,⎤ ⎡ALPHA⎤
	⎡Y⎤ ⎡+⎤ ⎡ALPHA⎤ ⎡K⎤ ⎡)⎤ ⎡ENTER⎤
X+H⇒X	⎡X/θ/T/n⎤ ⎡+⎤ ⎡ALPHA⎤ ⎡H⎤ ⎡STO⎤ ⎡X/θ/T/n⎤ ⎡ENTER⎤
Y+K⇒Y	⎡ALPHA⎤ ⎡Y⎤ ⎡+⎤ ⎡ALPHA⎤ ⎡K⎤ ⎡STO⎤ ⎡ALPHA⎤
	⎡Y⎤ ⎡ENTER⎤
If X<0 Goto B	⎡PRGM⎤ ⎡B⎤ ⎡0⎤ ⎡3⎤ ⎡X/θ/T/n⎤ ⎡MATH⎤ ⎡F⎤
	⎡5⎤ ⎡0⎤ ⎡PRGM⎤ ⎡B⎤ ⎡0⎤ ⎡2⎤ ⎡ALPHA⎤ ⎡B⎤ ⎡ENTER⎤
If X>1 Goto B	⎡PRGM⎤ ⎡B⎤ ⎡0⎤ ⎡3⎤ ⎡X/θ/T/n⎤ ⎡MATH⎤ ⎡F⎤ ⎡3⎤ ⎡1⎤
	⎡PRGM⎤ ⎡B⎤ ⎡0⎤ ⎡2⎤ ⎡ALPHA⎤ ⎡B⎤ ⎡ENTER⎤
If Y<0 Goto B	⎡PRGM⎤ ⎡B⎤ ⎡0⎤ ⎡3⎤ ⎡ALPHA⎤ ⎡Y⎤ ⎡MATH⎤ ⎡F⎤ ⎡5⎤ ⎡0⎤
	⎡PRGM⎤ ⎡B⎤ ⎡0⎤ ⎡2⎤ ⎡ALPHA⎤ ⎡B⎤ ⎡ENTER⎤

Basic Keyboard/PROGRAMMING USING THE SHARP EL-9900

If Y>1 Goto B	PRGM	B	0	3	ALPHA	Y	MATH	F	3
	1	PRGM	B	0	2	ALPHA	B	ENTER	
$D+\sqrt{(H^2+K^2)} \Rightarrow D$	ALPHA	D	+	2ndF	√	(	ALPHA	H	
	x^2	+	ALPHA	K	x^2	)	STO	ALPHA	
	D	ENTER							
Goto A	PRGM	B	0	2	ALPHA	A	ENTER		
Label B	PRGM	B	0	1	ALPHA	B	ENTER		
Print D	PRGM	A	1	ALPHA	D	ENTER			
End	PRGM	A	6	ENTER					

4. First, press $\boxed{Y=}$ and $\boxed{CL}$ to clear the Y1 prompt. Press $\boxed{\blacktriangledown}$ $\boxed{CL}$ to clear additional prompts if necessary. Set the viewing window for the graphing by pressing $\boxed{WINDOW}$ $\boxed{0}$ $\boxed{ENTER}$ $\boxed{1}$ $\boxed{ENTER}$ $\boxed{1}$ $\boxed{ENTER}$ $\boxed{0}$ $\boxed{ENTER}$ $\boxed{1}$ $\boxed{ENTER}$ $\boxed{1}$ $\boxed{ENTER}$. Execute the WALK program by pressing $\boxed{PRGM}$ and selecting WALK. The program will show you the random walk and then display the distance traveled in the walk. If your walk is short, then press $\boxed{ENTER}$ to execute the program again. When you have a long walk, press $\boxed{GRAPH}$ to view the graph. A long walk is greater than 10.
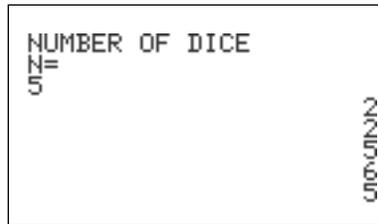
ROLLING DICE

1. Program the calculator to roll a set of dice.

2. Create a new program with the name ROLLING. Enter the following program
    and remember to press ⊡ ENTER ⊡ at the end of each line. If you make a
    mistake, use the calculator's editing features to correct the error.

3. Enter the following program using the Advanced Keyboard:

Print "NUMBER	⊡PRGM⊡ ⊡A⊡ ⊡1⊡ ⊡PRGM⊡ ⊡A⊡ ⊡2⊡ ⊡2ndF⊡
OF DICE	⊡A-LOCK⊡ ⊡N⊡ ⊡U⊡ ⊡M⊡ ⊡B⊡ ⊡E⊡ ⊡R⊡
	⊡SPACE⊡ ⊡O⊡ ⊡F⊡ ⊡SPACE⊡ ⊡D⊡ ⊡I⊡ ⊡C⊡ ⊡E⊡ ⊡ENTER⊡
Input N	⊡PRGM⊡ ⊡A⊡ ⊡3⊡ ⊡ALPHA⊡ ⊡N⊡ ⊡ENTER⊡
0⇒K	⊡0⊡ ⊡STO⊡ ⊡ALPHA⊡ ⊡K⊡ ⊡ENTER⊡
Label A	⊡PRGM⊡ ⊡B⊡ ⊡0⊡ ⊡1⊡ ⊡ALPHA⊡ ⊡A⊡ ⊡ENTER⊡
Print int (	⊡PRGM⊡ ⊡A⊡ ⊡1⊡ ⊡MATH⊡ ⊡B⊡ ⊡5⊡ ⊡(⊡
random×6)+1	⊡MATH⊡ ⊡C⊡ ⊡1⊡ ⊡×⊡ ⊡6⊡ ⊡)⊡ ⊡+⊡ ⊡1⊡ ⊡ENTER⊡
K+1⇒K	⊡ALPHA⊡ ⊡K⊡ ⊡+⊡ ⊡1⊡ ⊡STO⊡ ⊡ALPHA⊡ ⊡K⊡
	⊡ENTER⊡
If K<N	⊡PRGM⊡ ⊡B⊡ ⊡0⊡ ⊡3⊡ ⊡ALPHA⊡ ⊡K⊡ ⊡MATH⊡
Goto A	⊡F⊡ ⊡5⊡ ⊡ALPHA⊡ ⊡N⊡ ⊡PRGM⊡ ⊡B⊡ ⊡0⊡ ⊡2⊡
	⊡ALPHA⊡ ⊡A⊡ ⊡ENTER⊡
End	⊡PRGM⊡ ⊡A⊡ ⊡6⊡ ⊡ENTER⊡

ROLLING DICE (continued)

4. Execute the ROLLING program by pressing [PRGM] and selecting ROLLING. Enter the number of dice, up to eight, that you wish the calculator to roll for you. Roll five dice by pressing [5] [ENTER]. The program will show the five values for the dice on the screen. You should see a screen similar to the following (the values for the dice should be different).

```
NUMBER OF DICE
N=
5
                    2
                    5
                    2
                    6
                    5
```

Basic Keyboard/PROGRAMMING USING THE SHARP EL-9900

PYTHAGOREAN TRIPLES

1. Program the calculator to find Pythagorean triples. Pythagorean triples are three numbers x, y, and z that satisfy $x^2 + y^2 = z^2$.

2. Create a new program with the name PYTHAG. Enter the following program and remember to press ENTER at the end of each line. If you make a mistake, use the calculator's editing features to correct the error.

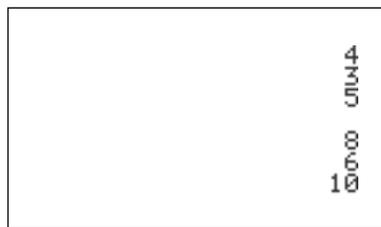3. Enter the following program using the Advanced Keyboard:

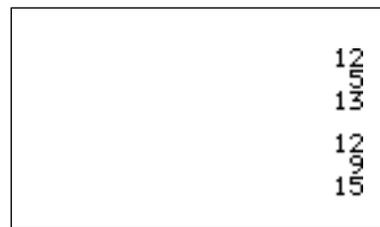|	
Input N	PRGM A 3 ALPHA N ENTER
2⇒J	2 STO ALPHA J ENTER
1⇒K	1 STO ALPHA K ENTER
Label A	PRGM B 0 1 ALPHA A ENTER
If √(J²+K²)≠ipart	PRGM B 0 3 2ndF √ (ALPHA J
(√(J²+K²)) Goto B	x² + ALPHA K x²) MATH F 2
	MATH B 3 (2ndF √ (ALPHA
	J x² + ALPHA K x²)) PRGM B
	0 2 ALPHA B ENTER
Print J	PRGM A 1 ALPHA J ENTER
Print K	PRGM A 1 ALPHA K ENTER
Print √(J²+K²)	PRGM A 1 2ndF √ (ALPHA
	J x² + ALPHA K x²) ENTER
Print "	PRGM A 1 PRGM A 2 ENTER
Wait	PRGM A 4 ENTER
Label B	PRGM B 0 1 ALPHA B ENTER
K+1⇒K	ALPHA K + 1 STO ALPHA K ENTER
If K≤(J−1)	PRGM B 0 3 ALPHA K MATH
Goto A	F 6 (ALPHA J − 1) PRGM B 0
	2 ALPHA A ENTER
J+1⇒J	ALPHA J + 1 STO ALPHA J ENTER
1⇒K	1 STO ALPHA K ENTER
If J≤N	PRGM B 0 3 ALPHA J MATH

PYTHAGOREAN TRIPLES (continued)

Goto A | F | | 6 | | ALPHA | | N | | PRGM | | B | | 0 | | 2 |

                              | ALPHA | | A | | ENTER |

End | PRGM | | A | | 6 | | ENTER |

4. Execute the PYTHAG program by pressing | PRGM | and selecting **PYTHAG**. Enter the upper bound for the Pythagorean triples. Set the upper bound to 15 by pressing | 1 | | 5 | | ENTER |. The program will show the first Pythagorean triple. Press | ENTER | to view additional triples. You should see screens similar to the following ones.

Basic Keyboard/PROGRAMMING USING THE SHARP EL-9900