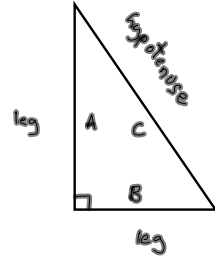# Advanced Math
Introduction
to
Programming

Three Essential Parts to a Computer Program

1) The calculator must communicate with the user to get the information required to complete its task.

2) The calculator must perform calculations with the information.

3) The calculator must communicate the results back to the user.

PROGRAM
Name = HYPTNUSE

```
1   clr home
2   Disp "ENTER A"
3   Input A
4   Disp " ENTER B"
5   Input B
6   Disp "ENTER C"
7   Input C
8   √(A² + B²) → C
9   Disp "HYPOTENUSE = "
10  Disp C
11
12
13
14
15
```

	Try
A	3
B	4
C	5

Assignment 1:

Write a program called
prgmLEG
to calculate the missing leg
of a right triangle.

PROGRAM
Name = HYPTNUSE

```
1   clr Home
2   Disp "ENTER _ A "
3   Input A
4   Disp "ENTER _ B "
5   Input B
6   √(A² + B²) → C
7   Disp "HYPOTENUSE _ IS"
8   Disp C
9
10
11
12
13
14
15
```

PROGRAM
Name = LEG

```
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
```

Assignment 2:

Write a program called
prgmQUADRATC
to calculate the solutions to
of a quadratic equation.

PROGRAM
Name = QUADRATC   : a+bi

#		#	
1	Clr Home	16	
2	Disp "Given :⌄ AX²+BX+C=0"	17	
3	Disp "ENTER A"	18	
4	Input A	19	
5	Disp "ENTER B"	20	
6	Input B	21	
7	Disp "ENTER C"	22	
8	Input C	23	
9	(−B+√(B²−4AC))/(2A) → X	24	
10	(−B−√(B²−4AC))/(2A) → Y	25	
11	Disp "ROOT⌄1="	26	
12	Disp X	27	
13	Disp "ROOT⌄2="	28	
14	Disp Y	29	
15		30	

Test
$1X^2 - 5X + 6 = 0$

$\{2, 3\}$