

In this Application for Unit 1 you will discover the versatility of the **Disp** statement and develop your own program. Skill Builders for Unit 1 should be completed prior to this activity.

**Objectives:**

- Embellish **Disp** statements to produce meaningful information using literal strings
- Write your own formula program

The **Disp** statement can display more than one item at a time.

Study the screen at the right in which the hypotenuse program has been modified. The program 'echoes' the arguments **a** and **b** with appropriate labels and then displays the calculated hypotenuse length appropriately labeled, too.

The items in quotes are called 'literal strings'. A string is a collection of characters 'strung' together.

When you edit your program remember to 'Check Syntax & Store' the program by selecting **menu> Check Syntax & Store> Check Syntax & Store** (or use the shortcut **ctrl-B** on the handheld) before running it.

Remember to use the comma as a separator between the items to be displayed. There should be a comma in between the text in quotes and the values **a**, **b** and the expression.

Write a program that takes one or more arguments, and then displays the result of a calculation based on the argument(s).

The calculation can be any formula. Here are a few suggestions:

Area of a geometric shape

Square:  $\text{side}^2$

Triangle:  $\frac{1}{2} \cdot b \cdot h$

Circle:  $\pi \cdot r^2$

Trapezoid:  $\frac{1}{2} \cdot (b_1 + b_2) \cdot h$

Volume of a solid:

Cube:  $\text{side}^3$

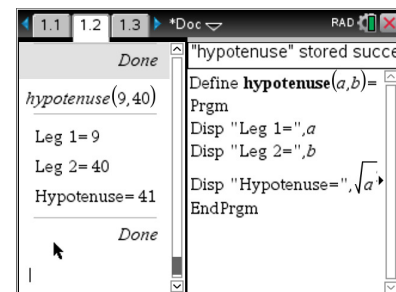
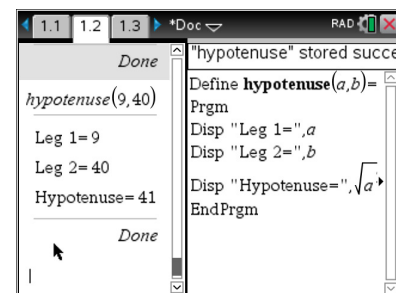
Square Pyramid:  $\frac{1}{3} \cdot \text{side}^2 \cdot \text{height}$

Sphere:  $\frac{4}{3} \cdot \pi \cdot r^3$

Simple interest:  $A = P + P \cdot R \cdot T$

Compound interest:  $A = P \cdot (1 + r/n)^{n \cdot t}$

The program should clearly label the output.



**Teacher Tip:** The list of formulas to use is given as a suggestion. You may choose to use topics from your current curriculum. The goal is to keep the computation simple at this stage with arguments used for input and *Disp* used for output, with the computation in the *Disp* statement. Storing values into variables within the program will not be introduced until the next unit (Unit 2) because it requires a discussion of local and global variables and the scope of variables in general. The TI-Nspire™ CX allows the use of multi-character identifiers, so words like *side* and *height* can be used as arguments.