

Now switch to RUN mode and try this program to make sure it works.

**Example.** Find the area of a sphere with  $r = 15$ .

Press See Displayed

15 **A** **2827.43** Area of sphere.

Now let's find the volume of the same sphere using this program.

Press See Displayed

15 **A** **2827.43** Area of sphere.

**RCL** **1** **15.** Recall the radius value  $r$ .

**×** **42411.50**  $r \times \text{Area}$ .

**3** **3.**

**÷** **14137.17** Volume of sphere.

In order to make this key sequence a separate program we need only add **LBL** to the top and **RTN** to the bottom.

Keys	Comments	Keys	Comments
<b>LBL</b>	} Beginning of program.	<b>×</b>	$r \times \text{Area}$ .
<b>B</b>		<b>3</b>	
<b>A</b>	Call subroutine A.	<b>÷</b>	Volume of sphere.
<b>RCL</b> <b>1</b>	Recall the radius value $r$ .	<b>RTN</b>	End of program.

Notice that instead of having to key in the radius again, we can simply recall it from  $R_1$ . Switch to W/PRGM mode and key in this new program. Don't press **f** **PRGM** this time because we want to keep the **A** program in the calculator.

Now let's use both programs.

**Example.** Find the area and volume of a sphere with a radius of 20.

Press

See Displayed

20 **A**

**5026.55**

Area of the sphere.

**B**

**33510.32**

Volume of the sphere.

The calculator finds the volume of the sphere in this example in the same way you did in the previous example.

**Second Subroutines.** A subroutine cannot call a subroutine of its own. There is simply no third pointer to keep track of things. If you try to call a second subroutine, you'll find that program execution transfers from that subroutine back to the main program, not the first subroutine.

