

Code Memory

Working Memory

```
#include <stdio.h>
#include <math.h>
// function prototypes
double computeVolume(double, double, double);
/*-----*/
void main(void)
{
    // Variable declarations
    double radius; // cylinder radius
    double length; // cylinder length
    double depth; // cylinder depth
    double volume; // liquid volume
    // Get data from the user
    printf("Please enter the values for the cylinder radius and
length: ");
    scanf("%lf %lf",&radius, &length);
    printf("Please enter the depth of the liquid: ");
    scanf("%lf",&depth);
    // Compute volume
    volume = computeVolume(radius, length, depth);
    // Display results
    printf("For a cylinder with radius %.3f and length %.3f and
liquid depth %.3f\n",
        radius, length, depth);
    printf("The volume of the liquid is %.3lf\n", volume);
}
/*-----*/
double computeVolume(double r, double len, double h)
{
    // Variable declarations
    double vol; // liquid volume
    // Use multiple instructions to make the computation
    // intermediate values are accumulated in the variable
    vol = sqrt(2*r*h - pow(h,2));
    vol = (r - h)*vol;
    vol = (pow(r,2)*acos((r-h)/r)) - vol;
    vol = vol*len;
    // Return the volume
    return(vol);
}
```

Radius ? 2.100
Lenght ? 5.600
Depth ? 1.040
Volume ? 14.965

r 2.100
len 5.600
h 1.040
Vol ? 1.813 , 1.922 , 2.672 ,
14.965

CPU