

1. Write a program that computes the volume of a sphere. The program should ask the user for its radius and print out the volume to the screen.

$$(1) \quad V = \frac{4}{3} \pi r^3$$

1. Write a program that asks the user for an ASCII-code, that is, an integer between 0 and 127, and prints the corresponding character.
2. Write a program where you use two integer type variables, say k and n, ask for their values from the user, then do the following calculations and print the results to the screen

(a) $k * n$ (b) $k + n$ (c) k / n (d) $k \% n$

3. What do the following programs print to the screen? First think about the solution in your head, then try writing the programs!

(a)

```
int i = 0, j = 3, k;  
k = ++i + j;  
j = i / 2;  
printf("%d %d %d",  
        i++, j, k);
```

(b)

```
double a = 3.0, b = 2.0, c;  
c = a / b;  
a *= b;  
printf("%f %f %f",  
        a, b, c);
```

4. *Extra:* Try to write a program that asks a lowercase letter from the user and displays the corresponding uppercase letter. *Hint:* add a properly chosen number to the code given by the user, you can use the ASCII-code table in the end of the lecture notes.