Practice Problems:

1. **C Program to demonstrate change of values of a variable.**

```
#include<stdio.h>
#include<math.h>
void main()
{
     float a, b;
     printf("Enter a number:");
     scanf("%f",&a);
     b = a;
     a = a+1;
     printf("%f, %f", a, b);
}
```

2. **C Program to compute squared root and cube of an input number.**

```
#include<stdio.h>
#include<math.h>
void main()
{
     float a;
     printf("Enter a number:");
     scanf("%f",&a);
     printf("%f, %f",sqrt(a), pow(a,3));
}
```

3. **C program to print size of variables of different data types.**

```
#include<stdio.h>
void main()
{
    printf("size of char: %d", sizeof(char));
    printf("\nsize of int: %d", sizeof(int));
    printf("\nsize of float: %d", sizeof(float));
    printf("\nsize of double: %d", sizeof(double));
}
```

4. **C Program to convert a lowercase letter to uppercase:**

```
#include<stdio.h>
void main()
{
     char a;
     printf("enter a lowercase character:");
     scanf("%c",&a);
     printf("%c",a-32);
}
```

Try yourself: Write a program that converts an uppercase letter to lowercase.

5. **C program to print the last digit of a number and all the other digits of it:**

```c
#include<stdio.h>
void main()
{
    int n;
    printf("Enter an integer: ");
    scanf("%d", &n);
    int last = n%10;
    int others = n/10;
    printf("last digit: %d", last);
    printf("\nOther digits: %d", others);
}
```

6. **C program to convert days to years weeks and days**

```c
#include <stdio.h>
void main()
{
    int days, years, weeks;

    // Read total number of days (since the year 0 A.D.)
    printf("Enter days: ");
    scanf("%d", &days);

    // Converts days to years, weeks and days
    years = days/365;    //Ignoring leap year
    weeks = (days%365)/7;
    days = days- ((years*365) + (weeks*7));

    printf("YEARS: %d\n", years);
    printf("WEEKS: %d\n", weeks);
    printf("DAYS: %d", days);
}
```

Homework Questions:

1. Compute the value of $5x^3-4x^2+\sqrt{(x)}+3$; read x from user
2. Solve the equation: $ax^2+bx+c=0$ and print the solutions. Read a,b,c from user
   Hint: compute the values of $(-b+sqrt(b^2-4ac))/2a$ and $(-b-sqrt(b^2-4ac))/2a$; here sqrt is a C function that computes the squared root of a number
3. Find the volume of a (a) cube and (b) cylinder
   Note: Read necessary inputs from user e.g. height and diameter of the cylinder for (a)
4. Compute quotient and remainder when you divide x by y (read x, y from user). Also, compute quotient and remainder when you divide y by x. Print all these four results.
5. Read a temperature in Celsius and print its Fahrenheit equivalent (Hint: C=(F-32)*5/9)
6. Print the sum of the series:1+2+...+n; read n from user (Hint: 1+2+...+n= n(n-1)/2)
7. Print the sum of the series:$1^2+2^2+...+n^2$; read n from user.