binaryToDec

Write a program that reads in a binary number, converts the binary number into the equivalent decimal number (i.e. converts the number with base value 2 to base value 10) and prints the converted decimal number to the screen. You do not need to check user input errors in the program.

A sample program template is given below:

```
#include <stdio.h>
#include <math.h>
int main()
{
   /* Write your code here */
   return 0;
}
```

Some test input and output sessions are given below:

(1) Test Case 1

```
Enter a binary number:
101
The equivalent decimal number: 5
```

(2) Test Case 2

```
Enter a binary number:
11110
The equivalent decimal number: 30
```

(3) Test Case 3

```
Enter a binary number:
110010
The equivalent decimal number: 50
```

(4) Test Case 4

```
Enter a binary number:
10010110
The equivalent decimal number: 150
```

```
#include <stdio.h>
#include <math.h>
int main()
{
   int bin,dec=0,remainder=0,temp=0;

   printf("Enter a binary number:\n");
   scanf("%d",&bin);

   while(bin!=0)
   {
      remainder = bin%10;
      dec = dec + remainder* pow(2,temp);
      temp++;
      bin = bin/10;
   }

   printf("The equivalent decimal number:
%d\n",dec);

  return 0;
}
```