```
1    public class Ch17Demo_Math_Recursion_Compounding_Interest
2    {
3        public static void main(String[] args)
4        {
5            int deposit = 1000;
6            int months = 12;
7            double rate = 12;
8
9            System.out.println("With " + deposit + " invested for " + months + "
     months at an "
10               + " interest rate of " + rate + " ,\n you earned $ "
11               + (balance(deposit, rate, months) - deposit));
12       }
13
14       public static double balance(int deposit, double rate, int months)
15       {
16           if (months > 0)
17           {
18               return ((1 + rate / 12 / 100) * balance(deposit, rate, months -
     1));
19           }
20           else
21           {
22               return deposit;
23           }
24       }
25   }
```