Assignment 3 Deadline: October 18th

1. The number 6 is said to be a *perfect number* because it is equal to the sum of all its exact divisors (other than itself).

   $$6=1+2+3$$

   Write a program that get a number from the user and define this number is perfect number or not.

2. The number 153 has the property that it is equal to the sum of the cubes of its digits: $1^3+5^3+3^3 = 15^3$. Write a program that will find all the three-digit natural numbers that have this property.

3. Write a program that first prompts the user for a value of x, reads x (as a **double**) and then computes and prints the value of eX without using either of the methods **exp** or **pow** from the **Math** class. The value of e^x is given by the following *power series*

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$$e^x = 1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \cdots$$