Task 1:

1. Design a program which receives an integer number and decides whether this is a prime number.

Task 2:

1. Create *CSphere* class that represents a sphere and contains information about the radius of the sphere (initialized in the constructor). Implement methods that allow reading and modifying the radius. The class definition can be done as follows:

```
class CSphere
{ public:
        // constructor
        //destructor
        //methods
   private:
        double m_dRadius;
};
```

2. Make the constructor and destructor to print their names on the screen.

3. Implement methods that calculate the diameter, the circumference, the surface area and the volume of the sphere.

4. Create a method that would print all the information about the sphere, such as radius, area, etc.

5. Make a program that would exemplify the use of the *CSphere* class.

Task 3:

1. Construct an array of *N* integers (*N* is a fixed value predefined in the code). Implement a program that fills in the array with random numbers, calls a sorting function, and prints the result on the screen. The sorting function should receive, as arguments, a pointer to the array and its size and should sort the array in ascending order. Do the processing with an even-odd sorting network. Example:
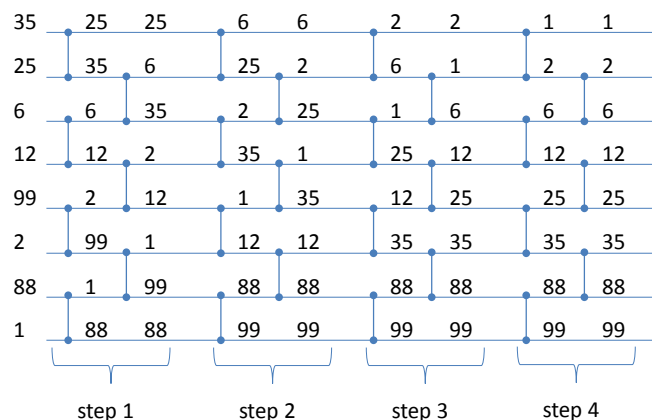
2. Calculate how many steps on average (in 100 attempts) are needed to sort an array of integers for various values of *N*.