In this exercise we use STL iterators, algorithms and function objects.

Exercise A (Function objects, 4p)

Modify and improve the random number generator from the lecture slides (lecture7, page 27) to create a lotto number generator:

Constructor must take two parameters that determine the range of numbers that the generator produces.

You may not write any for-loops in this exrcise. Use only STL-algorithms!

Write a program that generates numbers for three different games:

1. Lotto: 7 numbers 1 – 40
2. Viking lotto: 6 numbers 1 – 48
3. Eurojackpot: 5 numbers 1 – 50

Use either **generate** or **generate_n** algorithm to generate the three sets of numbers.
Print each set of numbers using a suitable **algorithm and output stream iterator**.
Then find numbers that appear in all three sets and print them. Use **set_intersection** algorithm to find the numbers that appear in all three sets:

- Find matching numbers from two sets and **print them using for_each algorithm**
- Find matching number from the third set and **print them using for_each algorithm**

To print the numbers with index numbering **you must use a function object** to remember the index between calls.

Example:

```
Lotto: 1 12 24 36 11 15 32
Viking lotto: 24 7 11 18 35 1
Matching numbers:
#1: 1
#2: 11
#3: 24
Eurojackpot: 47 1 40 24 4
Matching numbers in three sets:
#1: 1
#2: 24
```

After finding the matching numbers ask user if he/she wants to continue. If the answer is yes then generate another three sets of lotto numbers.